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ABSTRACT

Reports are made of a meeting of ten Asian representatives to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) at the Regional Office for Education in Asia and Oceania, in Bangkok in the fall of 1978. It was the responsibility of this group to explore the following topics: (1) To study and analyze the experiences of the participants related to training methodologies and new educational techniques; (2) To explore possibilities of adoption of new techniques; (3) To explore possibilities for adoption of new techniques for the promotion of functional education for out-of-school youth and adults; (4) To develop guidelines for use of educational innovations taking into account various sociocultural contexts; and (5) To develop proposed elements for country draft plans. (JD)

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APEID

ASIAN PROGRAMME OF EDUCATIONAL
INNOVATION FOR DEVELOPMENT

UNIVERSALIZING EDUCATION

New Techniques for Preparing Educational Personnel

ED193166

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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New Techniques for Preparing Educational Personnel

Study Group Meeting
Bangkok, 26 September - 7 October 1978

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Preface

In terms of the work plan of APEID for the second cycle (1978-81), the Study Group on the Use of New Educational Techniques for Preparing Teachers and Other Educational Personnel, with Reference to Universalization of Education, was convened from 26 September to 7 October 1978 at the Unesco Regional Office for Education in Asia and Oceania, Bangkok, Thailand.

Thirteen participants comprised the Study Group. They were from 10 countries, namely, Afghanistan, Bangladesh, India, Indonesia, Republic of Korea, Malaysia, Nepal, Philippines, Singapore and Thailand.

The Study Group had the following terms of reference:

1. To study and analyse the experiences of the participants related to training methodologies and new educational techniques;
2. To explore possibilities of adoption of new techniques such as distance teaching, micro-teaching, simulation, programmed instruction, team teaching, etc. to facilitate universalization of education at the early school levels;
3. To explore possibilities of adoption of new techniques for the promotion of functional education for out-of-school youth and adults;
4. To develop guidelines for use of educational innovations taking into account varied socio-cultural contexts; and
5. To develop proposed elements for country draft plans.

The problems and needs which inspired the deliberations of the participants were: 1) critical level of illiteracy; 2) shortage of qualified teachers; 3) lack of specialists and other educational personnel; 4) effective teaching approaches; 5) reduction of cost and need for qualified personnel in education; 6) effective procedure

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and technique of evaluation; and 7) upgrading the quality of teachers and other educational personnel.

In respect of the preparation and upgrading of teachers and other educational personnel, the discussions covered the following:

A. Regarding teachers, teacher trainers and tutors:

1. Training of teachers, both pre-service and in-service;
2. Upgrading trained teachers;
3. Staff development of teacher training institutions;
4. Training of volunteer tutors for non-formal education;

B. Regarding other educational personnel:

5. Training curriculum developers and other specialists;
6. Preparing correspondence course personnel;
7. On-the-job training of the writers of instructional materials;
8. Development of research personnel; and
9. Approaches for orientation and training of administrators and supervisors.

Innovative techniques on which experiences were shared, include:

1. Self-instructional materials and modules;
2. Distance teaching;
3. Microteaching;
4. Team teaching;
5. Reduced-instructional-time programme;
6. Multi-media package programme;
7. Simulated/CCTV teaching; and
8. Correspondence course with minimum use of postal service.

The report contains the highlights of the experiences of the participating countries on the design and use of new educational techniques directed to facilitate universalization of education. This is followed by a synthesis of experiences on the preparation and upgrading of different categories of teachers and other educational personnel and guidelines on use of new educational techniques. Appended to the report are proposed elements for redesigning and development of distance teaching programmes in two countries.

Chapter I

HIGHLIGHTS OF COUNTRY EXPERIENCES - CASE STUDIES AND PROBLEMS AND ISSUES

This chapter covers the highlights of the case studies presented by the participants of the Study Group. Each of the case studies was discussed in the light of problems faced with reference to universalization of education as background information.

It was noted that in carrying out innovative projects, the peculiar socio-cultural context of the area in which the innovation is to be introduced should be considered in relation to the national goals of the country.

In the course of the analysis of each case study, the Study Group explored problems and issues that may arise in the light of the specific educational and general developmental concerns of the different countries.

India

Introduction

Education is all important in a man's life. It enables him to lead a balanced life and contribute his best to society and its progress. Proper working of democracy requires intelligent and enlightened citizens. Hence there is need for universalization of education. In India, although the enrolment in the age group 6-10 is 97 per cent, the average attendance in school is not more than 65 per cent. It is lesser in extremely low literacy pockets.

Low attendance is due to several factors. In addition to the socio-economic, cultural and educational factors affecting the parents, the major contributory factors are: (i) unattractive schools; (ii) unimaginative teachers; and (iii) lack of suitable techniques to create and sustain the interest of pupils. The reasons for drop-outs are: (i) children are not provided individualized

instruction according to their capacities and needs; and (ii) failures in examinations frustrate them.

Project 1 - The Ungraded School System

Objectives

1. To evolve suitable techniques for retaining all the children that are enrolled in the schools;
2. To alleviate the alarming rate of wastage and stagnation;
3. To ensure permanent literacy;
4. To make optimum use of the existing educational facilities.

Description

The salient features of the ungraded school system are:

1. Standards 1-4 are fused into one class, grade or standard;
2. A child is allowed to progress according to his/her own ability and speed. He is given self-learning materials of instruction;
3. After each lesson is mastered, another lesson is given immediately to maintain continuity in learning;
4. Gifted children are allowed to progress according to their speed of achievement. They are given enriched materials to broaden their learning;
5. Slow learners are given special attention and encouragement;
6. Annual examinations are dispensed with. Passes or failures are not declared;
7. There is continuous self-evaluation by the pupils themselves. For every lesson the pupil evaluates his work. He is then made to correct his own mistakes and in the process additional learning takes place. The teacher helps the pupils only as and when required.

Record sheets are maintained, which include: (i) individual and class attendance sheets; (ii) consolidated progress cards for each class or standard; (iii) month-wise progress record of all the students in a class or standard for all the subjects; (iv) evaluation forms for visiting supervisory personnel; and (v) evaluation sheet on the progress of pupils graded into A, B, C, categories.

Preparation of instructional components

1. Teachers with classroom experience and some experts in the field are invited to prepare the self-learning materials.
2. The year's work is divided into convenient units of 30 or 40 self-learning lessons.
3. Each lesson follows the following steps:
   a) Preparation: Students are motivated to learn the new lesson by the use of such devices as questions, illustrations and accounts of their own experiences.
   b) Self-learning: All the lessons are presented sequentially. Students write down 'learning points' as they learn by themselves.
   c) Reinforcement: Opportunity is given to repeat the 'learning points' through questions, association, etc.
4. Coloured illustrations are prepared by art teachers and artists under the guidance of teachers and experts.

Outcomes of the project

1. The problems of wastage and stagnation are significantly reduced;
2. Since the learning process becomes easier and more attractive, children attend school regularly;
3. Each child progresses according to his/her ability and speed;
4. Since the children learn by themselves, they find joy in learning;
5. Children experience no fear of examination and consequent frustration;

6. Generally the course is completed in three years by gifted children and in five years by slow learners;

7. The objectives of providing literacy, numeracy and techniracy are fulfilled because the children are found not to lapse back into illiteracy;

8. The new technique is a boon to the underprivileged and the disadvantaged children, who otherwise would have remained illiterate.

Guidelines for use

Problem 1 : Motivating the teachers to implement the new technique. It has been observed that using the new technique has increased the teachers' work considerably. He has to prepare different lesson units everyday since the children are not studying the same lessons simultaneously. He has also to be more systematic in keeping and maintaining records. And some teachers are reluctant to attend to this additional work.

Strategy : Conduct periodic visits, seminars, conferences, discussions and review of the progress achieved in the use of the new technique.

Problem 2 : Teachers in the ungraded schools feel that they have more work compared to the teachers in the neighbouring schools.

Strategy : Keep the teachers in the neighbouring schools as busy as their counterparts in the ungraded schools by making them undertake socially useful productive work and environmental studies.

Problem 3 : Difficulty in preparing self-learning and other instructional materials.

Strategy : Involve varied groups in the production of materials such as: (i) experienced teachers; (ii) experts in textbook writing, child psychology, and language; and (iii) administrators.

Problem 4 : Difficulty in changing the attitudes of the traditional inspectors and supervisors.

Strategy : Conduct short orientation programmes and discussions on innovations for inspectors and supervisors.

Problem 5 : Difficulty in maintaining the economic viability of the project.

Strategies: i) Produce materials on a large scale to reduce cost in implementing the programme;

ii) Train teachers to improvise by making use of indigenous and locally available materials.

Problem 6 : No provision for graduates of the ungraded school system to continue their education after standard 4.

Strategy : The government should make arrangements to convert standard 5 to 7 in the higher primary schools to the ungraded system.

Problem 7 : Transfer pupils from the ungraded school to a formal school and vice-versa encounter adjustment problems.

Strategy : Allow transfer from the ungraded school to a formal school only if there is no ungraded school in the vicinity. A student who transfers from the formal school to the ungraded school must undergo diagnostic examinations to find out his level of educational achievement. Then he should be provided with appropriate self-learning materials which will gradually initiate him to the ungraded system.

Discussions

During discussions in the Study Group, the following observations were made. Teacher involvement at all levels of the programme should be intensive in order to build up a level of acceptance and identification by the practitioners themselves. It was also pointed out that while interaction between the teachers and the counsellors is essential, it is highly desirable that interaction among the teachers themselves both from the formal schools and the ungraded schools should be encouraged to produce better results. Visits of teachers in the neighbouring areas to the ungraded schools should be encouraged. This should enable them to learn at first hand the new approaches being carried out.

Project 2 - Project on Non-formal Education -

a) Part-time Education, and b) Continuing Education

Objectives

Adequate steps are taken by the Government of India to provide the children in the age group 6-14 with necessary incentives such as scholarships, supply of free textbooks, free uniforms, midday meals etc. In spite of all these, many children still stay away from school or drop-out at a very early stage due to social and economic reasons or the rigidities and constraints of the formal school system. There is an urgent need for providing non-formal education to the non-school going children and school drop-outs.

The part-time education course is designed for children in the age group 10-13 who may not be able to study in formal schools due to economic reasons. This course lasts for a period of 10 months and has the following objectives:

1. To develop linguistic skills necessary for social interaction;
2. To develop community, civic, scientific and vocational consciousness necessary in living a productive life;
3. To develop skills, habits and attitudes necessary for healthful living;
4. To develop functional numeracy; and
5. To develop local craftsmanship.

The continuing education course is for the early school drop-outs in the age group 10-13. This course also lasts for 10 months and provides drop-outs with facilities for multiple entry into any stage of formal education. The objectives of the continuing education course are:

1. To motivate the drop-outs to enter the formal education stream according to the principles of the multiple entry system;
2. To provide opportunities for drop-outs to further their studies;
3. To eradicate illiteracy;
4. To make good citizens out of drop-outs; and
5. To universalize education.

Description

1. The rate of educational wastage is high mostly in the rural and urban slums, and tribal areas. Educational wastage is high also in the education of girls. Centres for part-time and continuing education are selected on the basis of the results of an extensive survey conducted on critical areas of educational wastage.

2. Preparation of learning/instructional materials. For part-time education the following materials are prepared: (i) one book on the development of linguistic skills based on structured vocabulary; (ii) one textbook on working knowledge of mathematics, basic science and community and government; (iii) one book on environmental studies.

3. The preparation of instructional materials and the production of textbooks are undertaken by an expert committee consisting of primary school classroom teachers, personnel from the State Adult Education Council, social workers and a few educationists.

4. For continuing education condensed books are prepared, based on the syllabi for standards IV to VII in the various subjects such as: (i) language; (ii) mathematics; (iii) general science; and (iv) social studies. These materials and textbooks are prepared by teachers who teach the standards IV to VII and the curriculum developers from the State Department of Education.

5. Teacher training programme: Persons who teach in both centres for part-time education and continuing education are not necessarily teachers. Working teachers, retired teachers, housewives, social workers and local youths are utilized as tutors for these programmes. Before teaching they are oriented to the following: (i) concept of the programme; (ii) prepared learning/instructional materials; (iii) effective use of these materials; (iv) academic and administrative implications of the programme; (v) evaluative tools and procedures; and (vi) teaching methods to be used for the course.

6. Orientation programmes of short duration are also held to orient the supervisory staff.

7. Classes are held in any place at any time of the day or night to suit the beneficiaries. There is nothing rigid and everything is non-formal. Learning is made interesting and functional.

At the end of the 10-month period, tests are given to assess the performance of the beneficiaries. Children who pass through the part-time education programme are given certificates. After the completion of the part-time education course, the neo-literates are provided with facilities to continue reading by supplying them with books through a network of rural libraries sponsored by the State Adult Education Council.

Children under the continuing education programme are given a series of tests to find out their level of educational achievement. Having determined the level, graduates are given certificates which entitle them to join the mainstream of the formal school system to further their studies.

Outcomes of the project

The above programmes were initially tried out in 1977-1978 in four districts with 50 centres for part-time education and 50 centres for continuing education, with an intake of 50 in each centre. The results have been encouraging. So far the graduates of the continuing education programme did not lapse back into illiteracy. Children who pass through the Continuing Education Centres generally join the formal schools from Standards IV to VII.

Guidelines for use

Problem 1 : Poor quality of instructional materials, textbooks and feedback system.

Strategy : Devise adequate measures to get feedback, analyse issues and refine the materials.

Problem 2 : Inadequate training of tutors.

Strategy : Modify the training programme so as to use actual experiences. This way the tutors who man the Part-time and Continuing Education Centres will become more effective.

Problem 3 : Defective evaluation of pupils' progress under the continuing education programme.

Strategy : Utilize the expertise of the assistant educational officers in charge of Talukas who are professionally trained in evaluative procedures.

Problem 4 : Difficulty in getting suitable classrooms and scheduling of time suitable to the participants.

Strategy : Utilize school buildings, temples, mosques, houses of the villagers or any place as agreed upon by the majority of the beneficiaries. Get the consensus of the beneficiaries regarding time schedule for the classes.

Discussion

These programmes are considered as effective ways of promoting mass education and ultimately universalize education. Suitable incentive measures through programmes of functionality have to be evolved to attract the beneficiaries to these centres. Non-formal education is one of the effective ways in arresting the growing number of illiterates which is the cause of many ills in the society of India. A massive programme to make one hundred million people literate during the next five years was launched on 2 October 1978, the birthday of Mahatma Gandhi, the father of the nation and a great exponent of mass education.

Indonesia

Introduction

Universalization of education is one of the major tasks to be achieved in Indonesia. One strategy that is now adopted by the government is non-formal education to teach the illiterates and school drop-outs. Because of the enormous problem of illiteracy and also of the malfunctioning of past strategies, the Ministry of Education and Culture has proposed the policy and strategy of "Kejar"* programmes, designed to promote universalization of education throughout Indonesia.

Project 1 - Programmed Learning Packages A

Description

Programmed Learning Packages A are sets of instructional materials used in the non-formal education programme (equivalent to the primary school) of Indonesia. They contain the following:

1. Spiritual values;
2. Social values and attitudes;
3. Functional literacy in reading, speaking in Bahasa Indonesia, and arithmetic;
4. Environmental knowledge;
5. Health and family life;
6. Application of skills to raise income; and
7. Earning a living.

The objectives are as follows:

1. To develop and use "packages" of learning and information in the non-formal educational programme;
2. To form learning groups and learning centres;
3. To disseminate the basic learning packages in the learning centres throughout Indonesia.

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* "Kejar" is an abbreviation of the words "bekerja" (to work) and "belajar" (to learn) and/or abbreviation of the words "Kelompok" (group)and "belajar" (to learn). Thus it means "to catch up".

The project operates thus:

The programmed learning packages are used by three groups of learners:

1. Package "A" for illiterates, new literates and primary school drop-outs;
2. Package "B" for those who have completed Package "A" but are drop-outs from junior high schools; and
3. Package "C" for drop-outs from senior high schools and those who have completed Package "B".

The Programmed Learning Packages "A" enable children to meet the seven basic elements of essential learning needs. The preparation of Packages A is a combined effort of various government departments. The manuscripts are developed by various groups in an open nationwide competition. Workshops are organized for various subjects where packages of learning are also developed. These manuscripts are revised at the national level, field tested and then when fully accepted are produced in large quantities, e.g. in the form of booklets, cassette studies, posters, etc.

The Packages A may be studied in several ways, namely:

1. Self-learning for those who are no longer illiterates, e.g. after having gone through A_1-A_{20} booklets;
2. Group learning with the help of a tutor; and
3. Learning from each other. A learner may ask another to teach him and he then passes on what he learns to the others.

Learning groups are organized in villages throughout Indonesia, totalling some 600,000. Groups of 6-10 students are taught together. They are provided with basic knowledge and skills for a productive life through the use of these learning packages.

The personnel required to implement Packages A are trained at the national, regional and local levels. They consist of:

1. Volunteers who may not be qualified teachers but as tutors, discussion leaders, learning motivators, etc.;
2. Sub-district supervisors and field workers who help to organize learning groups and supply them with materials and ideas; and
3. Heads of community education, sports and youth section at the district level. They are responsible for the training of group leaders and the implementation of the programme in the district.

Guidelines for use

Problem 1 : Lack of learning materials.

Strategies:
i) Utilization of manuscripts prepared by various government agencies;
ii) Use of open competition in the production of manuscripts with honoraria given to the authors; and
iii) Utilization of manuscripts produced through workshops organized by National Technical Co-ordination Committee Secretariat.

Problem 2 : Motivation of participants.

Strategy : Neighbourhood groups are formed. This has been found to be effective because neighbourliness is maintained.

Problem 3 : To train large number of tutors.

Strategy : Tutors are trained by sub-district officials. They receive manuals explaining the use of the Learning Packages A.

Discussion

The learning Packages A_1-A_{10} have already been developed. These were tried out in August 1977. Packages A_{11}-A_{20} were to be tried out in March 1978. 1,993 volunteers, sub-district supervisors, district supervisors and provincial staff members have already been trained. By 1979, it is expected that the complete set of Packages A_1-A_{100} shall have been completed and implemented throughout the country. It is strongly believed that this scheme is the answer to the problems relative to universalization of education in Indonesia.

Korea, Republic of

Introduction

The Korean Educational Development Institute (KEDI) has developed new instructional plans to overcome various problems in the elementary and middle school programmes in Korea. This plan is being implemented in 16 demonstration schools and 213 co-operating schools. Through comprehensive and extensive evaluation of the new instructional system, it was found that the success in implementing such a programme depends largely on the preparation of teachers for the programme.

The emphasis in teacher education in Korea is to produce better teachers who can manage teaching activities in large classes more effectively in order to contribute to the universalization of education.

Project 1 - Multi-Media Package Programme for Teacher Preparation for the Elementary-Middle School Development Project, KEDI

KEDI developed a multi-media package programme for teacher education to improve the quality of teaching activities in the classrooms.

Objectives

The objectives of the programme are:

1. To provide relevant knowledge related to teaching technique such as presenting information;
2. To provide relevant knowledge related to teaching a specific subject matter; and
3. To provide opportunities for developing teaching skills by utilizing appropriate information.

Description

In order to achieve the above objectives, three kinds of studies were conducted:

1. Basic studies for designing;

2. Development of multi-media package; and

3. Implementation and evaluation.

1. Basic studies for designing

In the designing process, a series of studies have been conducted to identify the important problem areas in teaching. Through these studies, five problem areas in teaching were identified as critical.

Instructional objectives were then specified through analysis of related knowledge and subordinate skills. This was followed by selection of appropriate instructional media and strategies through extensive discussion by professors in Junior Teachers Colleges and experienced teachers from Demonstration Schools.

2. Development of multi-media package

In order to achieve the objectives described above, four different types of instructional materials were developed, namely: (i) 16 systematically constructed instructional modules consisting of instructional objectives, diagnostic tests, remedial references, semi-programmed reading materials, formative tests and remedial comments; (ii) about 200 instructional TV programmes or models for effective teaching of skills and information directly related to these skills. These TV materials are used during noon breaks and are supplemented with printed materials; (iii) about 400 instructional radio programmes designed to motivate teachers, provide relevant knowledge, and enhance the morale of the participants; and (iv) videotapes of testing programme or models on planning, teaching, evaluating and follow-up procedures utilized in the classroom.

Three different types of training sessions were conducted by KEDI. They are: 1) Self-Learning session with multi-media package; 2) Forum sessions with KEDI staff; and 3) Microteaching session under the supervision of KEDI senior staff.

Guidelines for use

Problem 1 : Difficulty in identifying the criteria for effective teaching.

Strategies: i) Conduct basic research on the teacher's role in the school and the changing society;

ii) Use of the systems approach in conceptualizing the whole teacher education relative to the other systems;

iii) Develop a more effective system of evaluation.

Problem 2 : Difficulty in specifying the objectives of teacher education programme.

Strategies: i) Introduce intensive training programmes for designers and teacher education specialists;

ii) Introduce systematic approaches for designing programmes;

iii) Utilize appropriate information gathered from evaluation studies.

Problem 3 : Difficulty in the selection of appropriate media and strategies for designing programmes.

Strategies: i) Conduct basic researches on the critical role of media in teacher education;

ii) Use functional designs for the teacher education course rather than departmentalizing courses.

Problem 4 : Difficulty in motivating teachers to undertake training and research.

Strategies: i) Develop a better incentive system such as certification and upgrading, etc.;

ii) Develop more conducive research atmosphere in the school;

iii) Provide opportunities for continuing interaction with the training institute by the use of visitation, correspondence, etc.

Discussion

Teacher preparation goals have to be related to the national development goals of Korea but the present goals developed in teacher education are too superficial. The personal characteristics of the teacher have to be evaluated in the context of the whole situation.

From experimental studies, it has been found that differences in the performance of trained teachers in the demonstration and co-operating schools participating in the KEDI programme are statistically non-significant compared to those not trained. However, in the opinion of the principals of these schools and other professionals, the scheme has succeeded. Perhaps the reliability of the evaluation matrix is questionable.

Project 2 - Continuing Education Programme for Teachers and Other Educational Personnel Involved in Correspondence High School in the Republic of Korea.

The Air and Correspondence High School programme in Korea was established in 1974. The major purpose of this programme is to provide high school education through modern educational technology for school drop-outs and other out-of-school youths and adults who wish to continue their education.

Objectives

The objectives of this project are:

1. To upgrade qualifications by providing them with relevant information on teaching techniques and then to provide opportunities for developing competencies needed by the teachers;
2. To improve the know-how of administrators so that they can make wise policy decisions; and
3. To provide employers of various business establishments with necessary knowledge to understand the needs for continuing education of their employees.

Description

Personnel involved in the correspondence high school come from different professional fields. The contents, therefore, take into account the specific needs of various sectors such as the teachers, administrators and employers.

The following general topics are commonly offered to all participants:

1. Background and objectives of the Air and Correspondence High School (ACHS);

2. The organization of continuing education system and the role of KEDI in this organization; and

3. The status and problems of the ACHS.

For the teachers, the following are covered:

1. The expected role of teachers in the school;

2. Procedure of instructional design and material development;

3. Related information on guidance and counselling; and

4. Utilization of instructional materials developed.

The administrators are given the following:

1. The effects of continuing education in the development of students and education of Korea; and

2. Related information on planning and decision-making.

The employers take up and discuss the effects of continuing education on the students and the development of education in Korea. The new techniques used in this programme include such devices as: 1) radio lectures, dramas and discussions; and 2) self-instructional materials for teachers. These materials are systematically developed and given to teachers. They are required to respond to the test items in the materials and send feedback to the KEDI. In the forum session, special time is allowed to discuss the problems.

Guidelines for use

Problem 1 : Shortage of specialists in continuing education.

Strategies: i) Utilizing various study programmes/exchange programmes for the training of personnel needed;

ii) Organizing study group meetings for the retraining of specialists in continuing education.

Problem 2 : Unclarified roles and tasks among personnel involved in correspondence education programme.

Strategies: i) Formulate specific duties and responsibilities through job analysis;

ii) Establish advisory committee to advise on their roles and tasks.

Malaysia

The universalization of education in Malaysia has resulted in the tremendous increase of the school population in both primary and lower secondary classes. Free education and automatic promotions from Standards 1-6 and Forms 1-3 have substantially reduced the school drop-out problem. Government Text Book Aid Scheme, applied nutrition programmes and greater community awareness of the value of education for children are some of the other factors. This spectacular increase in the school population has been catered for by the building of new schools, introducing double sessions and larger class sizes. But two other problems have emerged which require other strategies. This is in particular reference to the shortage of trained teachers and other educational personnel:

1. Teacher shortage - to meet the needs of the increasing school population;
2. Shortage of other educational personnel in the curriculum development area.

Project 1 - Distance Teaching In-service Programme for Temporary Untrained Teachers During School Terms

Introduction

Despite the existence of 26 Teacher Training Colleges in Malaysia providing two-year-full time courses, there are almost 15,000 untrained uncertificated temporary teachers, many of whom possess a minimum of two years teaching experience.

The Ministry has been conducting three-year part-time courses during school holidays for such teachers at several centres and training colleges, i.e. two weeks each in April and August and four weeks in November/December. This scheme gives 24 weeks of lectures in contrast to 60 weeks for the two-year full-time college courses.

Objectives

Despite the fact that the temporary teachers have more classroom experience, there are two main weaknesses:

1. The heavy concentration of lecture time during the vacation courses which in itself is insufficient to complete the syllabuses;
2. Lack of contact between the lecturing staff and the trainees during the school term.

Thus the need to reduce the existing imbalance between the teaching load of the two types of courses led to the launching of the Distance Teaching Programme. The specific objectives of the Project are:

1. To prepare supplementary curriculum materials in the form of printed notes, tapes/cassettes;
2. To direct temporary teachers to view ETV lessons on teaching methodologies and specific techniques with the help of specially prepared guidelines;
3. To establish teacher centres at suitable locations for discussions and tutorials with the assistance of staff members who conduct the vacation courses.

Description

The project is being launched in three phases:

Phase I. In October 1977 a pilot scheme involving distribution of 600 especially prepared notes and tapes to teachers in the northern states close to Penang was started. This was followed up by discussions and tutorials to those in the first year.

Phase II. Towards the end of 1978, the programme will be extended to other areas of Malaysia. ETV programmes would be made use of during this phase.

Phase III. This will involve full implementation in 1979 covering all teachers from the 1st to the 3rd year.

Initially the programme would be co-ordinated by the Malayan Teachers College in Penang with technical assistance from the Universiti Sains Malaysia.

Guidelines for use

The co-ordination of the various activities is crucial for the success of this project:

Problem 1 : The prepared programmes should be ready in time for distribution to the various centres.

Strategy : The identification of writing teams from existing training college staff and the early editing of these materials together with the proper production has to be supervised. The Project Co-ordinator himself has to work in close co-operation with all the different personnel and agencies involved. Time schedules are very important.

Problem 2 : Distribution of the materials to the trainees have to be done efficiently.

Strategy : This is done through the organizers of the in-service courses at the various colleges, who in turn distribute these to the trainees. Organizers have to be supplied with clerical service to keep track of such distribution.

Problem 3 : Tutorials and discussions at the teachers centres have to be planned ahead. Assignments given have to be completed by the trainees and assessed.

Strategy : Lecturers from training colleges have to plan their visits, have their objectives discussed and approved, and trainee participation and attendance ascertained well ahead of the actual visits.

Problem 4 : Costs involved in travel by lecturers and trainees to the teacher centres.

Strategy : Planning ahead of time, sharing of vehicles and location of centres in central areas.

Discussion

On completion of the three-year training, this Project's objective will be to ensure that the teacher training courses for the temporary teachers will be of the same standard as that of the regular two-year course. With the vacation courses and the supplementary programme provided through the Distance Teaching technique during school terms, it is hoped the trainees will be prepared for equivalent examinations as that of the regular course candidates.

Project 2 - Team Teaching Technique in the Training of Curriculum Officers for the Curriculum Development Centre (CDC), Malaysia

Introduction

With the rapid expansion of school enrolment, the need to review the existing curriculum and bring about changes to keep pace with national priorities, pupil needs and societal demands, became equally urgent. This need was translated into action when the Curriculum Development Centre of the Ministry of Education was set up as a separate entity. The main problem in making the CDC operational was that sufficient, suitable staff had to be identified and trained. This identification of staff for the CDC is a problem that keeps emerging every year when new staff have to recruited, either to strengthen or replace other staff.

CDC officers are recruited on the basis of applications from suitably qualified school teachers possessing the required teaching experience. Those applying for the advertised vacancies are then shortlisted by a committee within CDC and these are called for an oral and written interview. The interview technique does help in a limited way to study very closely the personality traits of the prospective officers. In the written part the candidates also indicate innovative curriculum practices they may have carried out.

On selection to the centre, the new officers undergo a training course for almost a month and this is done on a Team Teaching basis.

Objectives

At the end of the course it is hoped that the new curriculum officers would have achieved:

1. Basic understanding of the process of curriculum development from the point of view of research, planning, development, evaluation and implementation;
2. Basic knowledge regarding the ways of improving curriculum systematically and continuously;
3. Knowledge concerning the procedure and organization to meet the needs of curriculum change.

Description

An overall programme is drawn up with the assistance of a team of specialists who will then be responsible for successfully organizing the course. An example described here is the course organized in 1977.

This course was divided into several themes. These themes were further divided into sub-themes and were carried out in three stages: exposure, reinforcement and practical work. The topics for the course were as follows:

1. Research and Curriculum Practices.
2. Curriculum Evaluation.
3. Development of Curriculum Materials.
4. Experimenting/Try-out of Curriculum Materials.
5. Planning for Curriculum Implementation.
6. Effective Ways to Organize Curriculum, Methodology and Learning Techniques.
7. Strategy for Curriculum Development and a Study of the Organization of the CDC.
8. Briefing on CDC Projects and Units:
   - Language
   - Science and Mathematics
   - Social Studies
   - Population Education
   - Development of Prototypes
   - Experimental Projects
   - Research and Evaluation
9. Summary and Evaluation of the Course.

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All the above topics were dealt with in one or more ways using the following techniques:

- Introductory lectures on basic principles
- Open forums/panel discussions
- Viewing of films
- Specific case studies
- Data analysis
- Compulsory self-reading sessions (selected readings)
- Resource Centre usage
- Workshops and preparation of sample curriculum materials/modules
- Visits to other agencies of the Ministry of Education

The final phase of this Team Teaching project was to place the officers on attachment to different units in the CDC for on-the-job training. This enabled them to obtain a deeper insight into specific issues through greater interaction with the experienced members of the unit concerned. Other skills such as the use of audio-visual equipment and workshop techniques were also acquired through this programme.

Guidelines for use

Problem 1 : In the use of this technique several problems were encountered. In some cases, the schedule of the course was found to be too ambitious or too restrictive.

Strategy : The scheduling of activities has to be kept fairly flexible by the main organizing committee. Changes to the programme can and should be based on suggestions/evaluation carried out daily.

Problem 2 : In a fresh batch of officers, the group is heterogenous in several ways - their academic backgrounds may differ and their professional experience may also vary.

Strategy : In the subsequent sub-groupings these differences are noted and relevant changes are made, i.e. when discussing specific issues, functions, roles, projects, etc.

Problem 3 : Psychological reorientation and coming to terms with differences of professional opinions.

Strategy : Persons steering discussion groups must allow for divergence of views and encourage criticism. Good open discussions are important as officers will have to face much more peer criticism as curriculum developers than they did as teachers.

Problem 4 : Unsuitable personality traits that surface may have to be identified. Personal qualities are difficult to judge at a short interview and this is an area where there is need to improve techniques.

Strategy : Certain personal characteristics should be encouraged, e.g. team spirit, ability to accommodate professional differences, being resourceful and innovative, etc. Officers found to be sadly lacking in these should be put under strict observation over a period of time and if found still wanting, ought to be replaced.

Problem 5 : Having acquired suitable officers, the problem is one of keeping such officers in the centre.

Strategy : A further training programme for a longer period of time should be devised to upgrade and retain such staff for the strenuous task involved in curriculum development.

Discussion

Officers who fail to show the required traits that are desirable for the development of the centre as well as themselves are normally allowed to request for transfers back to schools. It is also hoped that officers who leave would take away with them useful experience that will enrich their subsequent teaching in the school system and thus be of benefit anyway.

Nepal

Introduction

Primary teacher education in Nepal has somehow not come up to the expectations of its people despite three decades of development. After the dawn of democracy in 1951, various efforts have been made to raise the literacy percentage and to train a large number of untrained teachers working in the primary schools of Nepal.

The number of literates in 1951 was only one per cent; now it has reached 19.2 per cent. Among these, only 5 per cent are women.

The number of primary schools before democracy was only 200 and now this has increased to 9,067.

Similarly, there was no provision for teacher training before 1951, whereas after this date out of 23,395 teachers, 8,794 of them (37.6 per cent) have been trained as a result of the various efforts made.

Despite the implementation of various programmes, there still exists a large number of untrained primary school teachers working in the schools.

According to the National Education System Plan 1971-76, a primary school teacher should have undergone training in school. This policy has been successfully implemented in the urban areas but due to the shortage of qualified teachers in the rural and remote areas, this regulation could not come into practice in those areas. So the Government of Nepal planned to train these under qualified in-service primary school teachers.

Nepal has adopted a system of paying full salary to the teachers drafted for regular training. This has made training very costly. There must be a programme to extend training facilities to reach teachers in remote and rural areas at minimum expense.

Project 1 - Teacher Training Through Distance Learning

Objectives

1. To reduce the number of untrained teachers already working in the schools;

2. To prepare more teachers within a short span of time;
3. To facilitate training of all (middle and low income groups);
4. To reduce the cost of the training programmes;
5. To eliminate the problem of finding substitute teachers in place of the teachers drafted for regular training programme;
6. To provide training facilities for teachers in villages to make training more feasible to them;
7. To provide training for teachers who are in actual teaching;
8. To improve the teaching-learning situation of the primary schools of the district as a whole.

Description

This distance learning project is an innovation designed to upgrade untrained teachers who are actually teaching.

This project is a continuing education planned to train eighth graders who are teaching in the primary schools of remote and rural districts in Nepal. This project is different from the ordinary correspondence system in as much as it utilizes the postal service once in a semester with two contact sessions - 15 days in winter and two months in summer.

A separate office to administer the project, called "Distance Learning and Correspondence Course Division", has been set up in the Institute of Education in Kathmandu.

Self-learning materials have been developed in five methodology subjects - language, arithmetic, social studies, health and physical education, arts and crafts. A guide to practise/teach these subjects has also been completed. These subjects were selected from the curriculum of B level of the primary teachers' training programme. Teachers should pass an entrance test to be enrolled in the programme. They are given self-learning materials (free of cost), teachers guides and primary curriculum and instruction on how to learn the materials.

Trainees have to undergo three internal assessments in each area, using questions prepared by trainors and a final

examination is administered to them after they have successfully gone through the internal assessments using questions prepared by the centre - Distance Learning Division.

A trainee should get 35 per cent mark in each assessment to pass and 50 per cent mark in practice-teaching. Both internal and external examinations are conducted during the contact sessions (two-month period in summer).

Financing the programme has been done jointly by UNICEF and His Majesty's Government of Nepal.

Outcomes

The Distance Learning Project has completed two phases covering three districts in the first phase and six districts in the second. During the first phase, Salyan, Baitadi and Kanchanpura districts participated, resulting in the training of 108 participants. In the second phase, Dandeldhura, Darchula, Surkhet, Dailekh, Vardia and Pyuthan districts participated, which resulted in the training of 216 participants.

The following are some outcomes of the project:

1. Teachers have been freed from worry while in training;
2. Psychologically, they were found free from disturbances and well-devoted to their education;
3. Financially, they could avail themselves of the opportunity to education in spite of the lack of money for living expenses in the city. They bring the things that they need from their homes and continue training;
4. Academically, their behaviour has been changed and they have become better teachers;
5. Lastly, the target to produce an extra 1,000 teachers within five years, besides the production of the campus-based programmes, has been operating within the expectations of the planners.

Guidelines on use

Problem 1 : Interrupted and unpredictable postal system to deliver the materials.

Strategy : Self-learning materials are prepared as early as possible and despatched through the post office.

Problem 2 : Trainees take the materials to their homes but do not read them.

Strategies: i) They are given orientation and motivation so that they may be interested to read them regularly;

ii) Materials should be designed in an interesting way;

iii) Sufficient number of supervisors and persons who are holders of diploma in education should be appointed to help the trainees.

Problem 3 : Students are often irregular and late.

Strategy : The Centre in charge should maintain attendance register and explain the importance of attendance and teachers' lectures.

Problem 4 : Trainees have different background and qualifications.

Strategy : Teacher educators from Kathmandu devote some of their time to improve the knowledge of the less qualified trainees after their regular hours.

Problem 5 : Language and vocabulary variations are found among the students.

Strategies: i) Self-reading materials are made as simple as possible.

ii) Teachers explain the subject matter in simple language so that students could understand.

Problem 6 : Shortage of instructional aids and other necessary materials.

Strategies: i) Centres in charge obtain necessary materials from Kathmandu;

ii) All teachers (especially arts and crafts teachers) should explore the use of local available resources while making projects.

Problem 7 : The practicability of the programme is to be checked.

Strategy : Feedback system is being designed to improve the programme.

Discussion

Participants from different countries had expressed their reactions as follows:

1. The educational outcomes of this programme should be assessed;
2. The shortage of trained teachers is reduced because of this programme;
3. The existing programme may be improved by use of radio to reach teachers in remote areas.

Philippines

Introduction

The universalization of education in many developing countries is a goal which has not been realized. In the Philippines, the government has made attendance from grade one to six of the elementary school compulsory, but there are some roadblocks to the complete implementation of the government directives to give every one an elementary education.

Although at present this roadblock has not developed into gigantic proportions, there are indications that unless measures are taken now a crisis will develop in the near future.

One unexpected roadblock is the dwindling supply of qualified elementary teachers brought about by many interlocking factors. Among these are:

1. A higher educational qualification now required for elementary teachers;
2. Comparatively low salary for teachers vis-a-vis similarly trained workers in business and industry;
3. Growing percentage of drop-outs in teacher training colleges due to financial problems;
4. Rapidly rising cost of living in Mindanao which has made the cost of college education too prohibitive for the middle and low-income families in the region.

These problem situations call for extraordinary measures which require immediate implementation in order to forestall the development of a crisis in education.

Project 1 - Open Programme - University of Mindanao

Objectives

Knowing these problems and the urgency of remedies, the University of Mindanao designed a programme whose objectives are:

1. To give opportunity for teachers with incomplete education to obtain the required Bachelor of Science in Elementary Education at cost within their reach;
2. To reduce the percentage of drop-outs from teacher education classes;
3. To provide opportunity for the under-qualified workers to upgrade their qualifications, as they work, at cost they can afford.

Description

The open programme makes use of the self-instructional module for home study, supplemented by student-managed group discussion as an approach to pre-service and in-service training of teachers and other educational personnel.

Phase I - 1974

This was primarily intended for the teachers in the service who had not yet completed their bachelors degree in elementary education. Cultural subjects needed by them were offered.

Phase II - 1977

The programme was expanded to include potential drop-outs and students who could not afford to come to the university because of their work schedule or financial inability.

Phase III - 1978

The programme was opened to employees of a remote industry who had low academic preparation which limited their opportunities for advancement.

Evaluation of the try-out phases: In 1979 the research department of the University of Mindanao will conduct a study to determine if:

1. Cost of education for students has been reduced by at least 50 per cent of the normal cost;
2. Participants obtained advancement in position and salary in their companies;
3. If at least 70 per cent of the teachers who were ETC holders obtained their bachelors degree.

Positive results will mean realization of the objectives of the Open Programme and will indicate its expansion and continuation.

Features of the Open Programme

The unique features of the Open Programme include:

1. Independent home study by the participants with the aid of an instructional module;
2. Contractual work;
3. Evaluation by the instructor.

Instructors are specifically trained for the programme. In addition to the basic qualification of holding a Masters Degree in Education or a Masters Degree in Teaching, all instructors in the programme are required to undergo a 20-hour workshop on the philosophy, procedure and evaluation of student work before they are assigned.

Procedure for students

1. Qualified students enrol in the University during the regular enrolment period, and pay the same fees as regular students;
2. The students attend the orientation meeting scheduled for their subjects. During this orientation meeting, they receive instructional modules, conference schedules, examination dates, and lists of other requirements;
3. The students sign contracts with instructors. The contracts specify the amount of work they intend to do and the grade for the work contracted upon completion of requirements;

4. The students, equipped with their learning package, study independently, giving one hour of study everyday for each of the fifty lessons required in each subject. The performance of the exercises in these lessons is accepted in lieu of attendance in the classroom.

Outcomes

Phase I - From 1974 to 1977

325 ETC Holders earned bachelors degrees, thereby obtaining complete qualifications.

Phase II and III will be assessed in June 1979.

Guidelines for use

Problem 1 : Keeping the motivation of students in the Open Programme at a high level in order to enable them to produce work of high quality within the schedule set up.

Strategy : Assigning a proctor for students in the same locality, whose functions are:

i) To call the students for conference every Saturday; to assist them during these conferences in identifying problem areas and seeking solutions to enable the students to fulfill their contracted assignments;

ii) To discuss and assist students in overcoming common difficulties; to use the conference as a means of determining the effectivity of a particular learning module;

iii) To assist the students in obtaining resource materials not contained in their learning modules.

Problem 2 : Scarcity of books and other media for reference.

Strategy : Designate learning resource centres in nearby, convenient locations, containing 'package' libraries. Each 'package' library will contain needed references for each subject area.

Problem 3 : Inadequate evaluation of student participation in group discussions.

Strategy : Where it is not possible to send an instructor to monitor and evaluate the group discussions, a transistorized cassette recorder will be loaned to learning resource centres where the students assemble for the group discussion. The discussion leader will take charge of recording the proceedings, emphasizing the need for each discussant to first identify himself. Cassettes will be sent to the instructor for evaluation.

Discussion

In the course of the interaction among the participants of the study group a question was raised relative to the financing of the instructional materials and the travel of instructors to learning centres. Because the programme is not subsidized by external agencies, all learning materials are paid for by the students in the same way that students in the campus pay for books and other printed matters. Cost of travel of instructors is paid by companies which sponsor their employees' participation, or by the university.

The discussion on the value of the self-learning module for teacher-education elicited the benefits which participants in the open programme enjoy in terms of reduced cost of education and elements favourable to effective learning built into the self-instructional module. One outstanding element is self-activity which is the basis of learning, and this element is maximized in the programme, but often neglected in the classroom setting.

The use of self-learning instructional module for home study reduces the cost of education for the teachers, and open for them opportunity to upgrade their education at cost they can afford without reducing the quality of education.

The use of instructional modules is based on the reception approach in instruction, which requires the careful selection and sequencing of materials to be presented to the learner. These materials are inputs which stimulate the learner to react in accordance with his level of capacity and experience. Each module prepares the learner for the next, and requires mastery before the learner proceeds to the next.

Since the degree of mastery depends on the motivation, experience and work put in by the learner, he can go as fast or as slow as he is capable. The fast learner may finish a semester's work in two weeks, while slow learner in 20 weeks.

The preparation of the module in accordance with the format provides conditions which facilitate learning. Knowledge of objectives helps focus the attention of the learner to the salient points of the lesson.

The abstract gives a quick overview and provides proper mind set.

The pre-test assesses what the student already knows. If he knows enough of the unit, he may omit it and proceed to the next.

The post-test tells the learner his own performance.

Since the module is placed in tne hands of the learner at the start of his lesson, his progress depends on his own responsibility, and his creativity. This is a departure from the spoon-feeding technique often found in the classroom, and makes for more responsible teachers.

Project 2 - University on the Air, University of Mindanao

Introduction

Another aspect of school personnel shortage occurs in the level of administrative and supervisory positions.

Prohibitive costs of attendance in the regular college classes prevent teachers from upgrading their qualifications for these higher levels of positions.

The University on the Air programme of the University of Mindanao was designed to help teachers in the service in rural areas of Mindanao who have already earned Bachelors Degrees in Education to improve their educational qualifications and earn credits leading to the degree of Masters of Arts in Education or Masters of Arts in Elementary Agriculture. This is designed to help these rural teachers become eligible for advancement in ranks as well as come in contact with new trends in teaching. The planning stage started in 1969 and it started its operation in 1971.

The University on the Air programme is based on the following concepts:

1. Education is not exclusively carried on in the classroom and need not be too expensive as to be far beyond the reach of the middle and low income groups;
2. Educational institutions should maximize the utilization of their resources to hasten national development;
3. More opportunities for higher education should be provided for those in the deprived regions of the country.

The objectives of the programme are:

1. To give opportunity to teachers in areas remote from centres of learning to upgrade their qualifications in spite of their lack of financial resources and time for study leave;
2. To maximize the use of resources other than the classroom for education and development;
3. To reduce the cost of education for teachers in the service whose resources are limited;
4. To enable teachers in the service to make the best use of time and effort by combining work and study for continuing education;
5. To fill the need for better qualified educators in small colleges in Mindanao;
6. To provide opportunities for teachers in the service to gain access to recent ideas and concepts in education to improve their effectiveness.

Description

The programme is a form of distance teaching with the following features:

1. It utilizes the facilities of the University of Mindanao Broadcasting Network with seven broadcasting stations in Mindanao. This is a commercial station owned and operated by the universities;

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2. Subjects offered on the air are divided into 34 broadcasts scheduled for the convenient listening time of the teachers;

3. Broadcasts are simultaneous in all stations and are in the form of straight lectures, dialogues, symposia, and panel discussions;

4. Forum leaders of each centre conduct meetings with students on Saturdays;

5. Common syllabus and examinations are given to students enrolled in subjects on the air with students in the main campus.

The bases of evaluation of student performance in the course are: 10 per cent for attendance in forums; 15 per cent for participation in forums; 20 per cent for term paper; 15 per cent for workbook; 20 per cent for mid-term examination; and 20 per cent for final examination.

Financing the programme during its initial stages was approximately four times as expensive as the regular graduate school programme in the main campus. It received aid from Asia Foundation at the start. However, since 1976 it operates on its own, purely on the tuition fees charged to students. Prepared tapes and lectures developed since the start of the project in 1971 are used again in succeeding semesters. Revisions, however, are made on lectures and tapes that are no longer relevant but the expense in doing this is not as high compared to the production of a completely new set of broadcasts.

Outcomes

1. Some six thousand teachers from rural areas improved their rank in wage and position classification. This resulted in increase in their salaries;

2. Many teachers, after completing their Masters degrees, earned promotion to the administrative and supervisory positions.

Guidelines for use

Just like any other new venture, this programme has met and is still facing problems. Some of these problems and the strategies employed in solving them are:

Problem 1 : Poor reception of broadcast due to poor weather conditions.

Strategy : Re-broadcast of lectures missed by students.

Problem 2 : Difficulty in adjusting the schedule of broadcasts for the convenience of students.

Strategy : A questionnaire study of the most convenient time of the participants.

Problem 3 : Production of broadcasts that will sustain the interest of students.

Strategy : Broadcasts presented in varied forms such as dialogues, symposia, panel discussions using actual graduate school students in the main campus and the broadcast man as lecturer. These are properly scripted.

Problem 4 : Limited reading materials in the centres.

Strategy : Packaged library materials are sent on rotation to the centres. They send the books back at the end of every term and a new set of materials are given to them for the new subjects offered in the centres.

Problem 5 : Limited financial resources.

Strategy : Tapping local aids as well as using again prepared tapes and lectures developed over the years.

Discussion

This innovation is in line with the objectives of Presidential Decree No. 6-A otherwise known as the Educational Development Decree of 1972 which encourages educational broadcasting to hasten national development. Through the use of the radio which is a common commodity in every rural home in the Philippines, teachers in the service grow in their profession. Some six thousand rural teachers in Mindanao have already benefited from the programme. It is an answer to the needs of small rural colleges for better qualified teachers.

Sharing of innovations like the University on the Air must be facilitated for other regions to adopt in order to hasten the upgrading of teachers in other rural communities. One example of sharing of such experiences was conducted through the initiative of the University of the Philippines in collaboration with ACEID.

The University of the Philippines sponsored an advanced-level workshop on teacher education last July 1977 directed to discuss and share innovations on teacher education all throughout the country in relation to problems faced by teacher training institutions.

Before the start of the workshop, the different teacher training institutions were sent a questionnaire to find out the major problems they were facing. The result of this questionnaire study showed that the problems met by teacher training institutions in the Philippines were along five major areas, namely:

1. Selection and recruitment;
2. Rethinking of the curriculum for greater relevance to national development goals;
3. Continuing education for teacher educators;
4. Non-formal education and community development; and
5. Planning, implementation, research and evaluation of teacher education innovation.

Two participants per region were nominated by their respective regional directors to participate in the workshop. The participant to the workshop was either a Dean of the Teachers' College, a Vice President for educational services or a senior professor of education. Each participant brought along at least a case study of innovation on teacher education. These case studies from different regions were analysed in the light of the five major problems met by teacher training institutions throughout the Philippines.

The workshop provided an avenue for the participants to share their experiences and develop deeper insights on the needs and problems of other regions. It was the consensus that subsequent workshops should follow not only on the national level but on the regional and institutional levels. The participants all agreed to organize and conduct workshops in their own institutions followed by another for the region patterned after the advanced-level workshop at the University of the Philippines. Results of the subsequent institutional and regional workshops were sent to the University of the Philippines, College of Education as the clearing house for innovations on teacher education.

As agreed upon,after a year in July 1978, the participants convened again at the University of the Philippines. It was found that all the 12 regions have been true to their commitment of conducting institutional and regional workshops in their regions. Copies of proceedings of these regional and institutional workshops were exchanged among the participants.

It was generally felt that the advanced-level workshop has helped the administrators of teachers' colleges all throughout the country become aware of what others in other regions are doing. Many of the innovations on teacher education may be helpful in other regions.

The next meeting of the participants of the advanced-level workshop will be held in July 1979, at the University of the Philippines campus.

Singapore

Introduction

There are two areas of major concern in the Singapore educational context: the first involves the re-orientation of the school system towards pragmatic objectives and the second concerns measures undertaken to meet the teacher shortage, the retraining of teachers and the upgrading and maintenance of teaching skills.

Primary education in the Republic has already been universalized: it is free for all pupils. However, in order to minimize educational wastage and to provide a more meaningful education for all pupils according to their abilities, the entire school system is being re-structured, beginning with the primary level. Pupils who are unsuitable for academic type courses are identified and channelled into the Junior Training Scheme (JTS) which incorporates a basic academic component with a functional orientation, specific vocational courses and an apprenticeship programme.

The success of the scheme must depend on a number of factors, one being the teacher's ability to discriminate accurately the abilities and potential of each pupil. Consequently, it became necessary in 1975 to organize a mass retraining course on evaluation for primary school teachers. It is this project which was presented for the consideration of this Study Group.

There is currently a teacher shortage in Singapore; in order to meet this shortage, various measures are being employed to attract new recruits. Another related problem is the falling enrolment in the non-English medium primary schools; it is evident that an increasing number of parents prefer to send their children to English medium schools. Consequently, it has become necessary to redeploy teachers from the non-English medium schools. Those who have the basic language proficiency in English are being retrained in language media conversion courses in the subjects they specialize in. Those who do not have the minimum threshhold level of English are being redeployed in other areas.

Upgrading the quality of teaching is a major concern of the Government. The following are some of the types of courses offered to trained teachers:-

1. A 2-year part-time course for non-graduate primary school teachers leading to the award of an Advanced Certificate in Education which equips participants in content and methodology to teach at the lower secondary level;

2. English language courses (90 to 120 hours) to upgrade the language proficiency of non-graduate English medium teachers;

3. Short modular courses in specific skills or content areas e.g., the use of photography in science teaching (7 hours), elementary hockey coaching and umpire course (24 hours), the teaching of structure and lexis in English (30 hours), and an introduction to Indian music (20 hours);

   A wide range of courses of this nature are offered to trained teachers every semester by various government agencies in the Republic such as the Institute of Education, and Extra-Curricular Activities Centre. Teachers are encouraged to apply for those courses in which they are interested.

4. Courses to train potential administrators such as school principals e.g. the Educational Administration Course (60 hours) run by the Staff Training Section within the Personnel Branch in the Ministry of Education.

Various methods and techniques are employed in the courses to upgrade teaching skills and one of these, i.e. simulation techniques employing closed-circuit television, has been highlighted for the attention of the Study Group.

Project 1 - In-service Training in Evaluation Techniques for Primary School Teachers

Objectives

1. To explain to primary school teachers the important implications which the restructured system of education holds for classroom practice;
2. To provide teachers with a basic knowledge of the various methods of evaluation and assessment;
3. To enable teachers to produce various devices and instruments for evaluation and assessment.

Description

Target group

Some 3,500 trained primary school teachers.

Approach

1. Participants view a series of 12 video-taped lectures explaining the basic concepts of evaluation. To exemplify the nature of these video-taped lectures, one of these programmes was shown to the Study Group.
2. After viewing the programme, participants break up into workshop groups:
   i) to discuss the programme and to seek clarification from an Institute Staff member who serves as a resource person;
   ii) to prepare test items based on the guidelines provided.
3. They are given a booklet containing a resumé of the 12 telecast programmes, a glossary of terms used and a reference list.

4. The best test items produced by participants are compiled into booklets and distributed to all for the purpose of reference.

Key concepts

The whole programme seeks to teach the following key concepts:

1. Evaluation is an essential element of the educational process;
2. It is a continuous exercise;
3. It is purpose-oriented;
4. Its purpose and procedure must be valid;
5. The information it provides must be relevant and usable;
6. It must result in the optimum development of the learners under the teacher's care.

Guidelines on use

The following measures have been undertaken to give realization to the key concepts identified:

Key concept 1

This concept has become an integral part of the restructured primary education system. Pupils are evaluated at every level of their school course.

Key concept 2

In order to ensure that evaluation becomes a continuous process, teachers are required to assess their pupils' performance on a regular basis and to set semestral examinations.

Key concept 3

The purpose of evaluation is to discriminate between those who are more suited for academic work and those more suited for vocational training.

Key concept 4

Test-items for semestral examination papers are prepared according to a table of specifications drawn up by the Ministry of Education. The question papers are scrutinized by the school principal and moderated by subject co-ordinators. There is also a meeting to collate the examination results and to decide on borderline cases.

Key concept 5

The data obtained is then used to decide whether a pupil remains in the academic stream or joins the Junior Training Scheme.

Key concept 6

Through this continuous evaluation process, a teacher can monitor the progress of each pupil, decide on the amount of further guidance needed and place each pupil in the programme for which he is best suited.

Project 2 - The Use of Simulation Techniques Employing Closed-Circuit TV

Objectives

1. To make teachers more aware of the elements of good teaching through self-evaluation and peer-group evaluation;
2. To enable them to observe themselves and their peers in action in a simulated teaching context.

Description

Target group

Teachers attending the Advanced Certificate in Education course at the Institute of Education.

Approach

1. Participants consult their tutor on the type of presentation they intend to make. This is related to the methodology course they have undergone;

2. They present either a complete miniature lesson lasting for 15 minutes or a part of a lesson before their peers in the CCTV studio where they are video-taped;

3. The lesson is played back immediately and participants see themselves in action. They assess themselves employing the criteria provided; their peers as well as the lecturer involved also assess their performance;

4. A discussion led by the lecturer in charge ensures this;

5. The lecturer compiles the critiques and these are evaluated.

Key concepts

1. To improve his teaching performance, a participant must become aware of his own weaknesses in teaching;

2. This awareness can be developed if he is made:

   a) to evaluate himself as he sees himself in action on the video-tape recorder;

   b) to evaluate his peers.

Guidelines on use

In order to achieve the key concepts identified above, a single performance by each participant is, perhaps, insufficient for some who might have limited talents in classroom teaching. Perhaps it is essential to provide weaker participants with more practice and some classroom supervision but the problems are as follows:

1. Participants maintain that the technique lacks realism as their 'pupils' here are their peers. To bring in real pupils would not be possible for the whole exercise as there are problems in logistics. To go out into real classrooms to record performances would entail setting up a mobile team. The present state of affairs makes it impractical to do this, as the institute is understaffed.

   A possible solution is to get participants to actually teach their peers, instead of getting

them to role-play. A predictable reaction would be that this is not the real level at which they teach.

2. Participants might maintain that their performance is affected by the unnatural environment - a studio, spot lights, microphones, etc. They have difficulty in attuning themselves to this artificial context.

However, not all students have adverse feelings to the technique, some apparently benefiting considerably from it. It strengthens the case for individual learning styles even at the teacher training level.

Discussion

1. Singapore has attempted to solve the problem of educational wastage through the introduction of the Basic Course leading to the Junior Training Scheme which caters for those pupils who are not academically inclined. It was pointed out that a pupil who joins this scheme might ultimately be better off than another who remains in the regular stream and either fails the final examination at the end of his secondary course or merely obtains a poor pass.

2. Participants were informed that the Evaluation Course conducted in Singapore has apparently had a beneficial backwash effect. Teachers have become more aware of the importance of evaluation and are more cognizant of the tools and techniques of evaluation. Evaluation has in fact shed light on the curriculum and this in turn shapes methodology. A proper balance, however, needs to be preserved; it is too easy for the whole curriculum to become so examination-oriented that teachers teach their pupils to pass examinations. This has been the experiences of some participants. It was noted that in a situation like this, it is the 'tail that wags the dog'.

Some of the participants pointed out that the video-taped lecture approach presented by Singapore could be of great use in the in-service teacher training programmes of other countries.

Thailand

Preamble

The present government policy in Thailand calls for the expansion of the four-year compulsory education to six years as a means to achieve universalization of education. However, traditional means cannot be employed to accomplish it because of the following problems:

1. Inadequate funds;
2. Unwillingness of teachers to take positions in the remote and sensitive areas; and
3. Shortage of quality teachers.

Project 1 - Project RIT - Reduced Instructional Time

Description

Project RIT is an attempt to solve the problems stated above through the use of well-prepared instructional materials.

The objectives of the project are as follows:

1. To develop instructional materials as a means of increasing the efficiency of the existing teachers;
2. To reduce the instructional time of teacher-pupil contact in order to reduce the cost of education.

The mechanics in the use of RIT is as follows:

In lower grades (1-3) about 15 per cent of teacher-pupil contact is reduced by the use of materials such as teachers guides, teaching aids and student's work book. Regular teaching, however, is still necessary to teach numeracy and reading skills in the lower grades. Self-discipline must also be developed in order to prepare the students for self as well as peer and group-learning activities.

Most of the materials prepared for the higher grades are for students' use, which are found to reduce the teacher-pupil contact to approximately 70 to 90 per cent.

Peer and group learning are emphasized as well as self-learning, especially in the upper grades. However, regular teaching by the teacher is still necessary for a few lessons.

As a whole, the experiment and try-out results prove that through the use of the new educational techniques such as programmed instruction and simulation, the teacher-student interaction is reduced tremendously without lowering the existing quality of education. It was noted that a wide variety of learning activities used such as buzz session, games and role-playing are very vital in maintaining students' attention and interest in learning even without the teacher's presence.

The team who prepares the instructional materials consists of:

1. Primary school teachers as writers of modules;
2. Subject specialists and curriculum co-ordinators who supervise the writers on the subject matter and the content of each subject;
3. Test specialists who assist the writers on test construction (pre- and post-tests for each learning unit); and
4. Research specialists whose role is to design the try-out, experiment, and analyse the data.

Guidelines on use

Problem 1 : Teachers who use the self-learning materials tend to revert back to their traditional methods.

Strategy : Train teachers using the microteaching technique and provide them with teacher's manual.

Problem 2 : A large amount of the instructional materials developed for both teachers and students causes problems of storage of materials.

Strategy : Develop materials that provide flexibility, that is, they may be used in different subjects. This way the problem of storage is lessened.

Discussion

1. Try-out and experiment results show at least a 50 per cent reduction of teacher-student interaction as a whole;

2. The materials developed result in favourable change in teaching and learning behaviour of teachers and students;

3. There is enough evidence to conclude that through the use of RIT instructional materials, the student's achievement is improved. Achievements of RIT students are higher than those of students taught in the traditional manner;

4. The use of the self-instructional materials makes it possible for one teacher to guide the learning activities of a greater number of pupils, that is, from a regular class of about 40 to as many as 100 pupils composing two to three classes. A teacher may be able to supervise the activities of more than one class simultaneously;

5. RIT is successful in reducing the time spent by teachers in correcting students' exercise and homework. This is achieved by training the students to correct the exercises and homework among themselves. It was found that this can be done in a variety of ways depending on the grade level and the nature of the subject matter. The exchange of exercise books for correction by the students is found to be as effective as correcting one's own work. Students are found to be as honest in correcting the exercises whether their own or those of their peers;

6. It is expected that self-confidence, self-discipline and problem-solving ability can also be achieved through the use of the new instructional materials. But studies on this have not yet been conducted;

7. Finally, the Project RIT is a strategy that has immense potentiality in solving the problems relative to universalization of education in Thailand.

Project 2 - Microteaching Approach in the Programme of Teacher Preparation at Pranakorn Teachers College

Introduction

In spite of many improvements in the universalization of education in Thailand, studies have revealed that the academic achievement of the children in primary level is generally low. Retention rate is about 16.3 per cent of the total number of pupils in primary education.

According to the Report of the Committee on Education Reform, one of the main problems to overcome is traditional teaching method. Giving information and learning by rote is still customary in most of the schools. Teaching-learning activities that encourage desire for learning and development of the thinking process and self-learning are rarely used.

It is necessary for the teachers colleges to focus attention on the problems of how best to prepare teachers with the competency needed. The follow-up study of teacher education in 1976 reported that the practical aspects should be stressed in preparing prospective teachers. Therefore the microteaching approach is used in the programme of teacher preparation at Pranakorn Teachers College to overcome these problems.

Objectives

1. To provide a concrete situation of relevance between theory and practice;
2. To assist students in developing a sense of self-analysis;
3. To provide the students with the ability to identify certain teaching skills and suitably incorporate such skills into their own behavioural repertoire; and
4. To provide the skills needed for the competence of beginning teachers in the Thai situation.

Description

This project involves three stages. The first stage involves the use of microteaching technique in the Thai teachers colleges. This stage was carried out as follows:

1. A pilot trial was made in one of the co-operating schools to find out the appropriate procedure in conducting microteaching sessions and the effect on the teaching behaviour of student teachers; and
2. A workshop was organized to find out the teaching skills suitable to prospective elementary school teachers and to produce documents, aids and models for microteaching training including supervisory skills.

The second stage involves the preparation of the staff and supervisors for the microteaching techniques:

1. A microteaching workshop was organized in order to have a general structured programme of workshop for training supervisors and personnel. It included the organization of microteaching sessions, use of assessment instruments, comparison of different devices of feedback and identification of teaching skills;
2. During the five-day workshop, each supervisor practises the teaching skills involved in microteaching by himself. He assesses his own performance through different elements such as peer versus pupils, reteaching or without reteaching, with video-tape or other devices. Finally, he compares all the procedures to determine what method is beneficial and what supervisory skills have to be developed. Through this process, the supervisor learns by experience all the details involved in microteaching which will be helpful to him in organizing micro-sessions for the student teachers;
3. The structured programme was tried in many workshops for college staff and co-operating teachers and also for the staff of various institutes. The results were constantly considered for improvement and adoption.

The third stage dealt with microteaching in the professional programme for student teachers involving the following:

1. The microteaching technique is mainly considered as one of the practical parts of the professional programme offered in the college for the student teachers before the beginning of their actual practice-teaching in the school;
2. Desirable teaching tasks in the elementary classroom is conceptualized in terms of classes of variables. These skills are practised with microteaching after the study of principles and associated theory;
3. The procedure of microteaching practice is briefly conducted as follows:

   i) The students are divided into small groups of not more than 12 with one supervisor;

   ii) After they have been oriented about microteaching with models and assessing practice, each group practises teaching skills in microteaching session under a supervisor;

   iii) In a microteaching session the student prepares a 6-8 minute lesson and teaches to the peer group of five students. The remaining students are observers with measuring instruments. Feedback devices used are audio-tape, rating instruments and critique from peers and supervisors. Video-tape is used in some cases;

   iv) The skills selected for the practice are variation, questioning, reinforcement, use of examples, use of chalkboard and set of induction and closure;

   v) Reteaching is rarely conducted except in special cases.

Guidelines on use

Problem 1 : Equipment is not always available for microteaching.

Strategy : Practice microteaching with the use of measuring instruments and peer group critique for feedback instead of using video-tape.

Problem 2 : Difficulty in identifying desirable teacher behaviour.

Strategy : Desirable teaching behaviour inventory may be made after conducting a survey among instructors with the use of questionnaires or interaction analysis or conducting interviews in the real classroom situation. Video-tape of a good model may also be made and used.

Problem 3 : Inadequacy of measuring instruments as guide for self-improvement.

Strategy : Construction of better measuring instruments by groups of supervisors. This instrument should be discussed and tried out for validity and reliability.

Outcomes

1. From the investigation of the results of workshops and also from the students' practice, it was concluded that the microteaching technique is useful;
2. A comparison of the competence in teaching of students using audio-visual devices with those using microteaching techniques shows that the latter, using microteaching, was more competent than the former;
3. Based on the results of the participants' evaluation of the microteaching workshops, many experiences have been gained:

   i) Better teaching techniques and teaching activities can be learnt through the actual operation of the project;

   ii) As for the feedback, video-tape was very helpful in self-analysis. However, without any equipment other ways of feedback were also helpful such as interaction analysis, teaching behaviour observation, rating instruments and critique;

4. The follow-up programme reported that the student teachers considerably developed their teaching skills in the classroom situation.

Discussion

1. The utility of the techniques requires time, finance, simulation and the development of skills. It was felt that great care has to be exercised in practising the skills such as variation, reinforcement and promoting pupil participation;
2. There is a need for modifying the curriculum of teacher education before introducing microteaching;
3. It was noted from Thailand's experience that:

   i) Microteaching technique developed elsewhere should not be wholly adopted without a study and trial period to evaluate and to adapt them to suit each country's own situation;

   ii) All the elements of the microteaching programme should be continuously reviewed and renewed;

   iii) Student's critique is beneficial not only for their self-improvement but also for the instructors in developing skills needed for their own role as well; and

   iv) The use of the microteaching technique without hardware equipment such as video-tape can be developed satisfactorily.

Chapter II

SYNTHESIS OF EXPERIENCES: PREPARATION AND UPGRADING OF TEACHERS AND OTHER EDUCATIONAL PERSONNEL

This section of the report is concerned with the synthesis of the experiences of the participating countries in the Study Group. Major needs and problems are used as points of reference in the discussion of the objectives, methodologies and innovation, outcomes as well as proposals for improvement and conclusion of broad areas that were identified. These broad areas are:

1. Training of untrained teachers, both pre-service and in-service;
2. Upgrading trained teachers;
3. Development of staff of training institutions;
4. Training volunteer tutors for non-formal education; and
5. Training and upgrading other educational personnel such as:

    i) Curriculum development and other specialists;

    ii) Correspondence course personnel;

    iii) Training of writers of instructional materials;

    iv) Research personnel; and

    v) Administrators and supervisors, etc.

Training of untrained teachers

In some Asian countries the problem of untrained teachers is felt more than in others. There are two categories of untrained teachers that have been spelt out. Under the first category are the student teachers needing pre-service training. Under the second category are the untrained teachers who need in-service training.

Pre-service training

By pre-service is meant the preparation of personnel for teaching before they enter the teaching profession. These students undergo a programme of training to qualify them to become teachers.

Two countries have designed programmes directed to provide pre-service training for persons who desire to become teachers. These are Thailand and the Philippines. The Philippine programme however caters to prospective teachers as well as to teachers in service who are under-qualified.

Objectives

The Pranakorn Teachers College in Thailand uses microteaching while the University of Mindanao in the Philippines uses the Open Programme. While both these programmes are directed to an identical target group, their objectives, however, are not exactly similar.

The objectives of the Thailand programme are:

1. To provide a concrete situation of relevance between theory and practice;
2. To assist students in developing a sense of self-analysis;
3. To provide the students with the ability to identify certain teaching skills and suitably incorporate such skills into his own behavioural repertoire; and
4. To provide the skills needed for the competence of beginning teachers in the Thai situation.

The objectives of the Philippine programme are:

1. To give opportunities for teachers with incomplete education to obtain the required Bachelor of Science in Education degree at cost within the reach of teachers;
2. To reduce the percentage of drop-outs from teacher education classes; and
3. To provide opportunities for the underqualified workers to upgrade their qualifications, as they work, at cost that they can afford.

Thailand's programme points to the importance of providing a balanced system of training in terms of theory and practice.

It was further noted that the Teacher Training Institutes prepare teachers who could be considered fully qualified only after they have further practised and improved their skills in the schools. The initial period of service in schools should be treated as a part of their training.

On the other hand, the Philippine programme is much more concerned with reducing the cost of training.

Methodologies and innovations

The use of microteaching has been found to be effective from the experiences of Thailand. Students develop basic skills in teaching through the use of five-minute microteaching lessons on specific skills. They have come up with a list of these specific skills believed to be needed by teachers. Then using the basic skills, the teaching of content of the various subjects is done in ten-minute microteaching lessons. A micro-lesson employing both skill and content is taught to peer groups. The feedback is done by proper evaluation procedures with peer critique and also supervision.

The experiences of Singapore on microteaching lessons differ from those of Thailand. They believe that a microteaching lesson should be presented in a holistic manner so as not to fragment the development of specific skills and the teaching of content. Whether this is more effective or not remains an open question.

Thailand's microteaching experience points to the efficacy of using the technique without the use of sophisticated video-tape equipment which may be far beyond the financial capabilities of other countries. Although video-tape equipment is also used, it is only employed in a few schools in Thailand. Immediate feedback is achieved by the peer evaluation system which is aimed at giving the student teacher some proposals for improvement. Peer evaluation, however, does not evaluate the ability of the student per se but its major use is to give specific suggestions directed to reduce weaknesses observed.

The microteaching techniques as developed in Thailand passed through three stages:

1. Study and organization. This stage involved the conceptualization of the procedure of microteaching through a pilot study and a workshop.
2. Organization. This stage involved the structuring of the programme in terms of personnel and materials needed which again involved the use of workshops.
3. Implementation. This stage involved its actual implementation in the professional programme for student teachers in the college. Before the student teachers begin their actual practice-teaching in school, they undergo the required microteaching sessions as part of their professional programme.

Two problems met in the implementation of Thailand's experience are related to time scheduling and the unrealistic setting of the peer group situation. The first problem, however, may be overcome by using small groups as well as scheduling microteaching sessions based on the most convenient time available of students and the supervisors.

In the case of the Philippines, the pre-service education of untrained teachers in the Open Programme has these unique features:

1. Independent home study by the student teacher with the aid of an instructional module;
2. "Contractual work"; and
3. Evaluation by the instructor.

The procedure for the students follows these steps:

1. Qualified students enrol in the University during the regular enrolment period and pay the same fees as regular students;
2. The students attend the orientation meeting scheduled for their subjects. During this orientation meeting, they receive instructional modules, conference schedules, examination dates and lists of other requirements;

3. The students sign "contracts" with instructors. The contracts specify the amount of work they intend to do and the grade for the work contracted upon completion of requirements;

4. The students, equipped with their learning package, study independently, giving one hour of study everyday for each of the fifty lessons required in each subject. The performance of the exercises in these lessons is accepted in lieu of attendance in the classroom.

The programme in the Philippines is directed to holders of the Elementary Teachers Certificate who are in need of meeting the present requirement of the government for permanent teachers to complete a four-year Bachelor of Science in Elementary Education and to prospective teachers. They are not completely untrained teachers as in the case of Thailand. Student teachers in the Philippines first practice-teach in laboratory schools in-campus after which they are assigned to practice-teach in the schools off-campus. These laboratory schools of the Philippines are complete elementary schools attached to the Teachers Colleges. The problem, therefore, of artificiality of the laboratory setting experienced by some other countries is reduced.

Comments and suggestions

Thailand's experience in microteaching lessons as part of the pre-service education of teachers reveals that the group using microteaching was more competent in terms of skills in teaching when compared with those who have not been exposed to the method. They have also found that even without the video-tape as a feedback device, other feedback procedures are just as effective. These feedback procedures include interaction analysis, teaching behaviour observation, rating instruments and critique done by peers.

It is, however, proposed that perhaps the programmes may be improved by the use of video-tapes of good teaching models. Evaluation may be improved by conducting validity and reliability studies of instruments used for evaluation.

In the Philippines, since the start of the project, some 325 holders of the Elementary Certificates have already earned their bachelor's degrees. Phases II and III of the project which cover the prospective teachers will still be assessed in June 1979.

In-service training

By in-service is meant providing untrained teachers who are already teaching with the needed training to become more effective and at the same time to get the needed certification to become permanent teachers.

Malaysia, Nepal and the Philippines have programmes falling under this category. The Malaysian project is entitled Distance Teaching In-service Programme for Temporary Untrained Teachers during School Term and that of Nepal is Teacher Training through Distance Learning.

Objectives

The Malaysian project is directed to accomplish the following objectives:

1. To prepare supplementary curriculum materials in the form of printed notes, tapes and cassettes;
2. To direct temporary teachers to view ETV lessons on teaching methodologies and specific techniques with the help of specially prepared guidelines; and
3. To establish teacher centres at suitable locations for discussions and tutorials with the assistance of staff members who conduct the vacation courses.

The project of Nepal on the other hand has the following objectives:

1. To reduce the number of untrained teachers already working in the schools;
2. To prepare more teachers within a short span of time;
3. To facilitate training of all (middle and low income groups);
4. To reduce the cost of the training programmes;
5. To eliminate the problem of finding substitute teachers in place of the teachers drafted for regular training programme;
6. To provide training facilities for teachers in villages to make training more feasible;

7. To provide training for teachers who are in actual teaching; and

8. To improve the teaching-learning situation of the primary schools of the district as a whole.

Some proposals for improvement, however, are suggested:

1. Malaysia's use of ETV lessons which are well integrated in the school programme and curriculum may be adopted by other countries. A close linkage between ETV and the school system may help in maximizing their use. The ETV programmes in Singapore are specifically designed to supplement and enrich the teaching of various subjects in primary and secondary schools. Teaching notes and charts to accompany various programmes are provided free to all schools utilizing the media. As teachers (those trained and undergoing training) watch these programmes together with their pupils, some beneficial indirect backwash effect on their teaching strategies might be experienced.

2. Nepal's programme may be improved by the establishment of teacher centres as well as the use of educational radio broadcasts. Teachers who avail of the training programme may be induced to remain in the service if they are required to sign a contract.

It should be noted that in terms of objectives, Nepal's project is directed to train teachers at minimum cost within the shortest span of time possible while that of Malaysia is to provide supplementary printed curriculum materials, tapes and cassettes, as well as ETV lessons and discussion and tutorial sessions.

Methodologies and innovation

Malaysia's project is operated in three phases:

Phase I: In October 1977, 600 specially prepared notes and tapes were distributed to teachers in the northern states close to Penang in the pilot scheme. This was followed up by discussions and tutorials to those in the first year.

Phase II: Towards the end of 1978 the programme will be extended to other areas of Malaysia. ETV programmes would be made use of during this phase.

Phase III: This phase will involve full implementation in 1979 covering all teachers from the first to the third year.

Initially the programme would be co-ordinated by the Malayan Teachers College in Penang with technical assistance from the University Sains Malaysia.

Nepal's project operates in this manner. First, it should be noted that their distance teaching is different from the ordinary correspondence system in as much as it utilizes the postal service once per semester with two contact sessions - 15 days in winter and two months in summer.

A separate office to administer the project called "Distance Learning and Correspondence Course Division" has been set up in the Institute of Education in Kathmandu.

Self-learning materials have been developed in five methodology subjects - language, arithmetic, social studies, health and physical education, arts and crafts. A guide to practice-teach these subjects has also been completed. These subjects were selected from the B level curriculum of the primary teachers training programme. Teachers should pass an entrance test to be enrolled in the programme. They are given free self-learning materials, teachers guides and the primary curriculum and instructions on how to learn the materials.

Trainees have to undergo three internal assessments in each area using questions prepared by trainers and a final examination is administered to them after they have successfully gone through the internal assessments, using questions prepared by the Centre - Distance Learning and Correspondence Course Division.

A trainee should get a 35 per cent mark in each assessment to pass and a 50 per cent mark in practice-teaching. Both internal and external examinations are conducted during the contact sessions (two-month period in summer).

The outcomes of the Malaysian Project cannot as yet be ascertained as it has been launched for merely a year. But on completion of the three-year training, this Project's objective will be to ensure that the teacher training courses for the temporary teachers would be of the same standard as that of the regular two-year course. With the vacation courses and the supplementary programme provided through the Distance Teaching technique during school terms, it is hoped the trainees will be prepared for equivalent examinations as that of the regular course candidates.

On the other hand, Nepal's project has resulted in the following:

1. Teachers have been freed from worry while in training;
2. Psychologically, they were found free from disturbances and devoted to their training;
3. Financially, they could avail themselves of the opportunity for education in spite of the lack of money for living expenses in the city;
4. Academically, their behaviour has been changed and they have become better teachers; and
5. Lastly, the target to produce an extra 1,000 teachers within five years besides the production of the campus-based programme has been operating within the expectations of the planners.

Some proposals for improvement for Nepal's project are as follows:

1. Sufficient number of supervisors and other persons holding the diploma in education should be appointed to help the trainees;
2. Students participating in the National Development Service Programme should be assigned to teach in the primary schools; and
3. The programme of National Development Service should be utilized to help solve major problems of training in the future.

The programmes operating in Malaysia and Nepal have a common purpose: that of upgrading the educational qualifications of teachers already teaching. These innovations have been developed to take into consideration the peculiar setting of the two countries and their financial capabilities.

Upgrading trained teachers

There are five countries represented in this Study Group particularly concerned with improving the quality of education in school through upgrading the competence of trained teachers viz. India, Thailand, Republic of Korea, Philippines and Singapore. The modalities employed to achieve this vary considerably; they involve the employment of:

a) Self-learning materials (India and Thailand);

b) A multi-media package programme (Korea);

c) Instruction through the mass media (Philippines);

d) In-service courses incorporating innovative features (Singapore).

Objectives

India and Thailand appear to have comparable objectives; both feel the need to maximize the use of limited resources and to develop self-instructional materials for pupils. In the case of Thailand, this is done with the specific purpose of reducing the necessity for more staff in the schools. The objectives of the short training programme for trained teachers in India are, specifically:

1. To orientate teachers to the nature and structure of the ungraded school system; and

2. To motivate them to implement the system in their schools.

In India, there exists an urgent necessity for evolving suitable techniques for educating all the young, to arrest the alarming rate of wastage, to ensure permanent literacy and to optimize the use of educational facilities. However, it was pointed out that this programme might require more staff to manage successfully than in traditional schools.

In Thailand, the objectives of the Reduced Instructional Time (RIT) Project are:

1. To develop instructional materials as a means of increasing the efficiency of the existing teachers;
2. To reduce the instructional time of teacher-pupil contact in order to reduce educational cost.

It has become imperative to seek alternative solutions because of inadequate funding, the reluctance of teachers to accept positions in remote and sensitive areas of the country and the shortage of good teachers.

In the Korean situation, the problems are of a different nature. To improve the quality of classroom teaching, the Korean Educational Development Institute (KEDI) has developed a multi-media package programme. The objectives of this programme are to provide:

1. Relevant knowledge related to teaching techniques such as presenting information;
2. Relevant knowledge related to teaching a specific subject;
3. Opportunities for developing teaching skills by utilizing the appropriate information provided.

Both Singapore and the Philippines seek to upgrade teacher competency through conducting continuing education programmes. However, because of geographical differences, the Philippines employs the mass media while Singapore conducts in-service courses in different training centres.

The objectives of the Open Programme in the Philippines are:

1. To give opportunities for teachers with incomplete education to obtain the required Bachelor of Science in Elementary Education at minimal costs;
2. To reduce the percentage of drop-outs from teacher education classes;

3. To provide opportunities for underqualified workers to upgrade their qualifications at minimal costs.

In Singapore, because distance is not a major problem, teachers attend various in-service courses. Some of these courses merely seek to develop specific skills; consequently, they are short modular courses usually not exceeding 30 hours in length. A wide range of such courses in content and methodology are offered every semester.

Other courses such as the course on Evaluation Techniques for Primary School Teachers are used as instruments to effect change in educational policy. As the entire Singapore educational system has been restructured to give it a more pragmatic orientation, it has become necessary for teachers to learn to evaluate their pupils' potential and abilities more effectively and reliably so that they can be located either in the academic stream or in the Basic Course which leads to their induction into the Junior Training Scheme.

The objectives of the evaluation course are:

1. To explain to primary school teachers the important implications which the restructured system of education holds for classroom practice;
2. To provide teachers with a basic knowledge of the various methods of evaluation and assessment;
3. To enable teachers to produce various devices and instruments for evaluation and assessment.

Besides such instrumental courses, there are other upgrading courses such as the Advanced Certificate in Education course offered to teachers. This two-year part-time course seeks to train primary school teachers in content and methodology so that they can teach effectively at the lower secondary level. The course incorporates some innovative features such as the use of simulation techniques employing closed-circuit television. The objectives of this programme are:

1. To make teachers more aware of the elements of good teaching through self-evaluation and peer-group evaluation;

2. To enable them to observe themselves and their peers in action in a simulated teaching context.

Methodologies and innovations

a) Self-learning materials

The orientation, production and utilization of self-learning materials vary considerably in India and Thailand.

In India, the self-learning materials which form the corpus of the ungraded school system are produced by teachers with classroom experience aided by some experts in the field.

In order to implement this system successfully on a state-wide basis (only 103 schools have so far been involved in the try-out), it is essential to reorientate teachers. The training scheme involves bringing in the teachers to the State Education and Research Training Centre (SERT) for a 15-day course. The course involves the following programme:

i) Orientation to the concepts and philosophy by staff members through lectures, discussions and seminars;

ii) Giving of teacher's guides to the participants. These guides outline the role and function of the teacher and explain how the self-learning materials are to be used;

iii) Going to an actual classroom situation to teach.

Each participant has to teach at least five lessons. The course participants are brought back to the Centre after a trial period of three months, and difficulties and problems in conducting the programme are discussed in study groups. Participants are also visited once a week by staff members.

The self-instructional materials under the RIT Project in Thailand are produced by a team comprising of primary school teachers who serve as writers of the modules, subject and test specialists and curriculum co-ordinators.

b) Multi-media package programme

In Korea, a multi-media package programme has been developed. Five areas of teaching skills were identified.

Four different types of instructional materials have been produced viz.:

i) Sixteen systematically constructed instructional modules;

ii) About 200 instructional TV programmes or modules for effective teaching of skills and information;

iii) About 400 instructional radio programmes; and

iv) Video-tapes on planning, teaching, evaluating and follow-up procedures.

To train teachers to use the materials, three types of training programmes were conducted by KEDI:

i) A self-learning session with the multi-media package;

ii) Forum sessions conducted by KEDI staff;

iii) A micro-teaching session under the supervision of KEDI staff.

c) Instruction through the mass media

In the Philippines, a forum of distance teaching utilizing the facilities of the University of Mindanao Broadcasting Network is used.

d) In-service courses incorporating innovative features

The approach used in the In-service Course on Evaluation Techniques for Primary School Teachers made use of a series of 12 video-taped lectures accompanied by practical workshops.

Comments and suggestions

1. The upgraded system in India has significantly reduced the problems of wastage and stagnation. Under this system there are no examinations and consequently no failures. While learning is self-paced, the system does not seem to provide for remedial measures to be taken in the case of a child who repeatedly fails a unit.

2. Also, the Indian system tends to lead to individualized learning and each child tends to be an "island" to himself for some subjects. In Thailand the emphasis is different since the development of abilities in groups is stressed. It was mentioned that in the Indian programme more stress should be given to the development of oral skills.

3. Since the Indian system places considerable emphasis on outdoor and environmental studies and activities, learning has become more attractive and the self-instructional materials make it easier for children to learn. The materials developed seem to have brought about a desirable change in teaching and learning behaviours of teachers and pupils.

4. As far as RIT in Thailand is concerned, try-out and experimental results reveal that there is at least a 50 per cent reduction of teacher-student interaction.

5. Through RIT there is some evidence to indicate that pupil achievement is higher than in the traditional schools and the same is true with the Indian experience. However, it has been noted that in the case of Thailand, the performance in the rural experimental schools is lower than that in the urban where children are educationally more advantaged. A further study could be undertaken in which pupil performance in the rural experimental schools could be compared with that of pupils in urban control schools.

   Since a summative evaluation had not yet been undertaken, it is perhaps premature to conclude that the RIT materials are highly successful.

In Korea, the outcomes of the first small-scale try-out showed that the instructional materials were significantly effective, revealing an average gain of about 30 points over the control group. But in subsequent try-outs, the score fell. However, since 1975, as teachers in the experimental schools became more familiar with the materials, the scores have increased significantly.

6. RIT has been successful in reducing the amount of time spent by teachers in correcting pupils' exercises and homework. This is achieved by training pupils to correct these themselves. In India, however, it has been found that teachers in the ungraded schools have more work to do compared to the teachers in the formal schools.

7. Additional problems, difficulties, and suggested strategies to solve these may be seen in the country reports of Korea, Philippines, and Singapore.

Development of staff of training institutions

In the course of discussions on micro-teaching, the Thailand participant emphasized that the critiques in this technique provided by the student teachers have proved to be an excellent means of developing the staff of the training college.

Another technique which is a recent innovation and is being widely applied is the advanced-level workshop on continuing education of teacher educators through self-analysis and self-renewal. The workshops have proved to be an excellent means of sensitizing teacher trainers to the new roles, facilitating understanding and promotion of educational innovations in the area of new teaching techniques and in the organization of teacher training programmes. While such exercises have been promoted, with direct involvement by Unesco at the regional and the national levels under the Asian Programme of Educational Innovation for Development, the technique is being extended to the local and institutional levels by the countries themselves as a follow-up of national-level action. The organization and impact of such sub-national level activities have been described by a Filipino participant.

Training volunteer tutors for non-formal education

Universalization of education is one of the major tasks to be achieved in Indonesia and India. Despite several steps taken by both countries to provide schooling facilities, the drop-out rate, at a very early age, owing to social and economic reasons is indeed very high. There is thus a high incidence of illiteracy and educational wastage and consequently an urgent need to provide non-formal education for these children and school drop-outs.

Objectives

In the case of India there are two distinct programmes on non-formal education: part-time education and continuing education. The part-time education programme is directed for those in the age group 10-13 who, owing to special home circumstances, may not be able to study in formal schools. The part-time education course lasts for 10 months.

The objectives of this programme are:

1. To develop the linguistic skills to enable them to speak, read and write;
2. To enable them to understand their environment, government and developments;
3. To develop skills, habits and attitudes necessary for healthy living;
4. To develop in them functional numeracy;
5. To introduce them to local crafts.

The continuing education course also lasting 10 months provides early school drop-outs, with facilities for multiple entry into any stage of formal education.

In Indonesia a conscious attempt is also being made to promote the universalization of education by introducing non-formal education through instructional materials called "Learning Packages".

The objectives are:

1. To develop and use "packages" of learning in the non-formal education centres;

2. To form learning groups and learning centres;

3. To disseminate the basic learning packages in the learning centres throughout Indonesia.

It is hoped that these programmed learning packages will enable children to meet the basic elements of the essential learning needs.

Methodologies and innovations

Both these programmes of non-formal system of education will involve the utilization of large numbers of personnel - both trained and untrained, and the production of learning and instructional materials for self-learning.

In India the following materials are prepared:

1. A book containing structured vocabulary;

2. A common textbook containing a working knowledge of Mathematics, Science, Community and Government;

3. A book on Environmental Studies.

For continuing education, condensed materials are prepared on such school subjects as Languages, Mathematics, General Science and Social Studies.

The persons who teach in these centres need not necessarily come from the ranks of teachers. As many as 20 per cent of the staff in India are volunteers, such as retired personnel, and social workers. They are given a short crash training programme for a period of one to two weeks, where they are oriented to:

1. The concept of the programme;

2. Prepared instructional materials;

3. Usage of these materials;

4. Academic and administrative implications;

5. Evaluative tools and procedures; and

6. Demonstration of teaching methods.

Learning takes place in any suitable venue and at any convenient time. Tutors are given a token sum as payment for their services.

In Indonesia the implementation of this scheme has been launched on a pilot basis since 1977. The instructional materials have been prepared by a central agency with assistance from individuals, groups and other departments of ministries.

The Packages may be studied in several ways, namely:

1. Self-learning for those who are literate;
2. Group learning with the help of a tutor;
3. Learning from each other.

It is proposed to organize learning groups in 600,000 villages, each having 10 groups of 6-10 students. As such there is a need for 6,000,000 volunteers to teach these groups when this non-formal education programme is fully implemented.

It is hoped that this personnel will be trained at three main levels: national, regional and local. As there is no payment for such 'teachers', the success of the programme will depend to a great extent on the "gotong royong" (mutual assistance) principle of service to the nation's unfortunate illiterate.

Comments and suggestions

Both India and Indonesia are facing several problems in the implementation of this programme. The cost is tremendous and financial constraints are too huge for early success. Lack of suitable teaching and learning materials and the shortage of personnel/volunteers are being tackled. The training of such personnel to carry out these programmes need further evaluation and study.

From initial studies the Indian experiment seems to indicate that these children who attend such non-formal classes do not lapse into illiteracy. This is evidenced by the good attendance at rural libraries by these participants. There is, however, a need for a systematic evaluation to determine the success of this programme.

Thailand's example of utilizing training college students to man these non-formal classes is somewhat difficult because the location of these learning centres in India do not always coincide with those of the urban-centred training colleges.

In the Indonesian example, the programme using programmed learning packages has been implemented on a pilot basis and it is not possible to evaluate the project yet. But initial response has been good and it is felt that this scheme may be the answer to the problems of universalization of education.

Training of other educational personnel

The value and effectiveness of educational innovations are dependent on the nature of the inputs of the various components involved in their management and operation. A high quality of these inputs is desired and this characteristic comes from the skills of the personnel who undergo training.

The common concern of the participants in the Study Group is the search for the best training technique for:

1. Curriculum development specialists;
2. Correspondence course personnel;
3. Research personnel; and
4. Administrators and supervisors.

Training of curriculum specialists

Specific objectives

Malaysia seeks to provide trainees with:

1. Basic understanding of the process of curriculum development from the point of view of research, planning, development, evaluation and implementation;
2. Basic knowledge regarding the ways of improving curriculum systematically and continuously;
3. Knowledge concerning procedure and organization to meet the needs of curriculum change.

The other countries have the same objectives for their training programmes.

Method used

Malaysia follows a well-organized training scheme. The participants are selected from among the teachers in the service possessing a minimum five years of teaching experience.

The accepted applicants are enrolled in one-month long courses conducted by teams of professionals using a course of study which gives a broad theoretical background of the different aspects of the curriculum as well as practical exercises.

The instructional approaches used are varied and teaching aids of different kinds are used. The final phase of the training programme is the on-the-job experience to which participants are exposed. They are attached to the persons in the curriculum development unit for further practice.

The training programme of other participating countries, although not presented as innovations, follow the same pattern.

Comments and suggestions

After completion of the training cycle, the participants become curriculum officers who are given the responsibility of preparing the syllabi and learning-teaching materials of the school curriculum. They also serve as textbook evaluators.

Training of correspondence personnel

India, the Republic of Korea and Nepal use correspondence courses extensively in their efforts to speed up the universalization of education in their respective countries. They need trained personnel for this special educational approach.

The Republic of Korea has the following objectives:

1. To upgrade the qualifications of correspondence course teachers by providing them with relevant information on teaching techniques and other competencies;

2. To provide employers of various business establishments with necessary knowledge to understand the need for the continuing education of their employees.

India's objectives are to provide orientation for teachers in:

1. The concept of the programme;
2. The effective use of the prepared instructional materials;
3. The academic and administrative implications of the programme;
4. The evaluative tools and procedures; and
5. Teaching methods to be used for the course.

In Nepal, the objectives of training of correspondence course teachers are identical with the training of the regular teachers.

In India, the training of teacher educators who handle the primary school correspondence courses is given at the centre itself. The teacher educators of the teachers colleges in the five centres who are in charge of the correspondence courses for the secondary schools are trained at the Headquarters of the State.

In Korea, teachers in the regular schools are recruited to teach in the correspondence schools. These recruits are given short training courses to give them orientation on:

1. The background and objectives of the air and correspondence courses;
2. The organization of the continuing education system and the roles of KEDI in the organization;
3. The status and problems of the air and correspondence courses.

The intensive training course of study for teachers includes:

1. A discussion on the expected roles of teachers;

2. The procedures of instructional design and material development;

3. Related information on guidance and counselling;

4. Utilization of instructional materials developed by KEDI.

In the training, various approaches are used, including:

1. Radio lectures, dramas, discussions;

2. Self-instructional materials; and

3. Forum discussions.

Comments and suggestions

It is expected that those who complete the short training programme can teach effectively in the correspondence classes.

The training programme has changed the attitude of employers towards correspondence courses since they allow their employees to enrol.

Training of writers of instructional materials

This topic was not discussed at the meeting. However, certain initiatives were mentioned and one such case was written up as RIT (Thailand) at the suggestion of the Group. Against the traditional approach of sending people to learn about instructional materials in universities overseas, it was pointed out that it was possible to arrange participatory training of the staff of RIT, where the critiques provided by the staff members provided an excellent approach to staff training for the purpose. This approach can be easily used, provided there are one or two experienced persons to stimulate and promote this kind of participatory evaluation and training.

Training of research personnel

Exchange of experiences among the participants has brought out some techniques used among them.

Singapore provides training in research methodology in its higher degree programmes in education and sends key

personnel abroad to specialize in research. In Korea, there are provincial research institutes which give training in co-operation with KEDI. In the Philippines, teachers assigned in the research unit of the Ministry are given in-service training which follows a short curriculum. In Thailand, research training is part of the masters and doctoral degree programmes at the university. Teachers assigned for research duties get in-service training provided in various research institutes.

Training of administrators and supervisors

Country experiences reflect common features in the training of supervisors and administrators who have been promoted for having shown exceptional performance in both higher and lower level positions.

In the Philippines, the Philippine Academy of the Philippines undertakes the training of government officials for varied assignments. This includes the training and upgrading of top education officials of the Ministry of Education and Culture, regional directors, superintendents and supervisors. Modern techniques of educational management are employed as a means of exposing these educational personnel to recent developments.

In Thailand, the Ministry of Education plans to establish a co-ordinating centre which shall undertake the task of training administrators and supervisors, so that they will improve their knowledge and skills necessary in their work. Also, under the Ministry of Education, different departments undertake programmes to train their own personnel to meet their specific needs and requirements of administration. The courses for these programmes are organized every year or as often as is deemed necessary, for the personnel of different faculties such as science, English, social studies, languages and so on. In certain training programmes instructional modules are developed for use.

In India, administrators and supervisors on-the-job are periodically brought to the administrative training colleges for orientation in new skills in administration and supervision. A three-tiered programme is in operation for different levels of administrators. The top level officers who are associated with and assisting in policy-making are invited to the Administrative Training College for brief periods once a year to discuss and

exchange views on new educational ventures. The middle-level administrators are brought to the Administrative College once a year for periods varying from one week to four weeks to orient them with new trends in teaching techniques, latest educational developments and how to improve the system. The lower-level administrators and supervisors are trained at the regional, district and block (Taluka) levels once a year or as often as there is a need. However, orientation courses are held frequently for fresh entrants who take up positions of administrators and supervisors.

Whereas in most countries, separate and specific courses are designed and operated for different levels of administrators, Korea brings together under the Saemaul Movement all levels of administrators from various ministries and institutions in a training course, where they don the same dress, share the same living conditions and study the same courses and undergo the same exercises, for a period of one month to three months.

In order to prosper, educational innovations must have the full support of administrators and supervisors. There is a need for administrators and supervisors to be exposed to relevant and updated information to develop the right attitude that may be conducive to the successful management of innovations. This can be done through short study courses or workshops and this is one way of preventing incidents similar to the one that is described below.

A participant related an interesting episode.

> "Sometime after the conclusion of a very successful course of orientation of the teachers who were to be responsible for new science courses in their schools, I decided to monitor the impact of the course by paying surprise visits to a few schools in the company of the supervisor of the area. At the first school, I noticed a class in session where the teacher was introducing a science concept. Much to my gratification, he was conducting the class according to principles of discovery learning, with the students actively engaged in experimenting and discussing their experiments and observations, helped and inspired by the teacher occasionally with lead questions and interpretations. Suddenly, the supervisor

burst upon the teacher, and in an agitated mood, yelled, 'Why are you wasting time; teach them something'."

Imparting of attitudes and understanding, particularly for work in rural areas, is regarded by many countries to be of greatest importance. Most of the participating countries have therefore launched programmes for administrators of all levels to actually stay and work in villages for varying periods of time.

In the Philippines, officials and employees of the government undergo Paglilingkod Ng Bagong Lipunan (PBL) or rural community service for two weeks each year while they are in government service. During this two-week service, they are assigned to a barrio captain who co-ordinates all PBL workers' activities of his village (barrio). The aim of PBL is to hasten development in rural communities through the use of the technical know-how of varied groups of government employees and officials working and living in deprived sectors of the country.

The results of PBL in the Philippines seem to indicate that:

1. The deprived communities benefit from the programme in the development of projects directed to improve their socio-economic conditions; and
2. The government officials and employees develop better understanding and empathy for the ways of life and needs of Filipinos in rural areas.

A similar practice of rural service is done in Thailand. At the Centre of Fundamental Education in Ubonrajathani in Thailand, supervisors and administrators in the lower level are trained with actual work at the villages in order to link the elementary education with the development of the village community.

In India, all the administrators and supervisors have to get acquainted with the rural development activities. The national extension service centres at the block level and the district development committees enlighten the officers regarding the activities to be undertaken to: (i) make the people become aware of their duties, rights and responsibilities; (ii) to identify rural talent which

could be harnessed for all-round development of the community; and (iii) to prepare the rural people for self-help.

The administrators and supervisors are required to stay with the villagers for a certain number of days in a month to have first-hand information about their needs so that suitable action may be taken on the spot.

The students of the Krishi Vigyan Kendras, the Vidyapeethas (Rural Folk Community Centres) and the Teacher Training Colleges go to the villages and stay there for periods ranging from one week to three weeks to evolve plans of integrated action for the development of the rural community.

In Singapore, courses are evolved to train potential administrators such as school principals, e.g., the Educational Administration course (60 hours) run by the Staff Training Section within the Personnel Branch in the Ministry of Education.

These courses were introduced to provide expertise and information to potential principals, senior assistants and senior teachers. It seeks to equip participants with a basic knowledge and understanding of general financial and administrative procedures of the new roles they have to play.

To-date, eight such courses have been conducted. An approximate number of 40 participants make up each course. The course is conducted on a part-time basis. Participants attend courses two afternoons a week and the duration of the course is about three-and-a-half months.

A number of the in-service courses offered in Singapore utilizes sophisticated hardware such as video-tape recorders (VTR), slide presentations with audio equipment and language laboratories. One such course using hardware of this nature to advantage is the Advanced Certificate in Education Course (mentioned earlier) offered by the Institute of Education. In this course the VTR is used as part of the Simulation Teaching Programme. This programme has been described earlier.

Experiences of these countries show that the methods used in these courses for the training of administrators and supervisors include: 1) Lecture type sessions; 2) Panel discussions; 3) Viewing of films; 4) In-basket training; 5) Group dynamics; 6) Simulated games; and 7) Role playing.

Conclusion

In the case of training of untrained teachers, the participants felt that they could benefit from such experiences. They noted that several programmes are launched by other countries for the purpose, considering their financial resources and limitations.

The following modes may be considered as means of disseminating and sharing these approaches with other Asian countries:

1. Holding other study groups, bringing together those who are engaged in innovations;
2. Convening meetings at national, regional and local levels in the different countries for exchange of information and materials;
3. Promoting exchange of personnel between countries;
4. Making provision for easy access to literature concerning innovations;
5. Documenting Asian experiences on innovations for local as well as foreign consumption especially those that are locally initiated; and
6. Production and exchange of local textbooks and other materials in different Asian countries.

Considering the upgrading of trained teachers, the group felt that the use of self-learning materials, if well prepared and activity-oriented, may provide a viable solution to the problem of teacher shortage. In its preparation, the participation of practising teachers should be encouraged so as to utilize their own practical experiences in the classroom. There are certain negative teacher attitudes to new innovations which need careful analysis and study.

In-service courses to update teaching competency have had several beneficial backwash effects. In the in-service programme on evaluation techniques, it was evident that teachers became more aware of the tools and methods employed and this improved their general teaching/learning strategies in the school situation.

The preparation of personnel and volunteer tutors for non-formal education assumes greater importance as the participants felt that non-formal education is one of the effective ways of eradicating illiteracy and promoting mass education. India and Indonesia face huge problems in this regard. The programme of distance teaching by some countries may be considered to solve the problem of training volunteers and other workers for non-formal education. It would be beneficial also if there are frequent exchanges of information and strategies among Asian countries. Inter-country visits to study the programmes on the spot would greatly help in improving and redesigning educational innovations.

Regarding the training of various categories of other educational personnel such as administrators, supervisors, researchers and other specialists, the group felt that there is a need to promote further training strategies and benefit from the innovations of other countries. There is an immediate necessity of evolving multi-pronged approaches. Training of specialists and researchers is still in its initial stages but there are manifest innovative attempts along this line that have been recognized by the group as promising.

Chapter III

SYNTHESIS OF EXPERIENCES: GUIDELINES ON USE OF NEW EDUCATIONAL TECHNIQUES

This chapter will present guidelines drawn from the experiences of the participating countries in the Study Group. Guidelines for the use of four innovative programmes have been evolved. These programmes are:

1. Teaching approaches involving the use of self-instructional materials;
2. Distance teaching techniques using radio and partial use of postal service;
3. Microteaching and Close Circuit Television (CCTV) and
4. Team teaching.

The guidelines suggested in this chapter may be useful for countries desiring to design and implement similar innovations. They should be used, however, in the context of their own particular needs and problems.

Teaching approaches involving use of self-instructional materials

Exploration and rethinking of the teaching-learning situations have generated innovative schemes, designed to enhance effective learning on the part of the learners and maximize the use of resources by the school systems.

This section deals with the approaches which involve the use of self-instructional materials placed in the hands of the learners as 'package' or 'kit'.

Two types of materials are identified. The first type consists of a package or kit of instructional materials for pupils in the primary schools to learn either under full or partial supervision of the teachers. The objectives of these materials are to reduce contact time between pupils

and teachers or increase the number of pupils which may be placed under one teacher.

The second type consists of packages which are designed for independent study by the learners. These are intended for school drop-outs at various stages.

Target groups

1. Illiterate adults and school drop-outs;
2. Pupils in the primary schools - Grades 1-7.

Rationale

1. To reduce the work-load of teachers and give the learners the benefits of individualized learning;
2. To educate the illiterate adults for an effective and economical approach to universalization of education;
3. To reduce wastage and stagnation in schools;
4. To ensure permanency of literacy;
5. To facilitate self-paced learning among students;
6. To reduce the interaction time between the teacher and the taught; and
7. To change the teaching and learning behaviour.

Inputs

1. Well-trained personnel who implement the technique. Suggested personnel consist of (a) co-ordinators; (b) instructional material developers; (c) clerical staff for records and typing; and (d) registration or recruitment clerks.
2. The following aspects may be emphasized for training the teachers in the use of instructional materials in the schools:

    i) Teachers have to be properly trained regarding the technique of using the self-learning materials;

ii) Teachers have to be trained and encouraged to improvise any material that may be required in the process;

iii) Teachers have to be encouraged to take up innovations without the fear of failure and other consequences;

iv) Teachers should become aware of the ways and means of obtaining community support for the innovation;

v) Procedures for evolving evaluative tools for system analysis and self-analysis have to be determined;

vi) Periodic meetings of teachers who implement the programme and exchange of views help monitor difficulties and initiatives of other users of the same innovation;

vii) A proper climate has to be created to promote innovative behaviour on the part of the teacher through the following methods:

a) Propaganda by educational personnel at various levels;

b) Articles, lectures, etc. by teachers themselves; and

c) Publicity of innovation in the newspapers and the magazines.

3. The following means may be adopted to obtain the support of the decision-makers (higher-ups):

i) By inviting them often to the courses, meetings, etc. connected with the development of the technique;

ii) By trying to explain personally the usefulness and the far-reaching effects of the technique;

iii) By indenting upon the services of the persons who are interested in educational development and who have easy access to the specific decision-makers;

iv) By making frequent direct or indirect references to the innovation when the decision-makers are present; and

v) By involving the decision-makers in any phase of designing, improving and evaluating.

4. Instructional materials are prepared and evaluated as follows:

i) Care should be taken to see that experienced classroom teachers prepare the materials;

ii) Suitable illustrative materials have to be prepared by artists and art masters under the guidance of teachers;

iii) Learning activities have to be carefully spelt out;

iv) Before putting the instructional materials to use, a try-out has to be undertaken to refine the materials;

v) Primary school teachers who have no knowledge in preparing self-instructional materials should undergo on-the-job training, the details of which are as follows:

a) They read a self-learning booklet on how to write the self-instructional materials, how to formulate behavioural objectives and how to construct tests;

b) They are assigned into teams of two to five members;

c) Each team is assigned one topic to write the behavioural objectives and the test items;

d) A brain-storming session is organized to decide various approaches to teach and to learn a topic;

e) The team after producing the materials presents a draft to the Critique Committee. The Committee members may suggest some changes;

f) The team revises the material based on the suggestions;

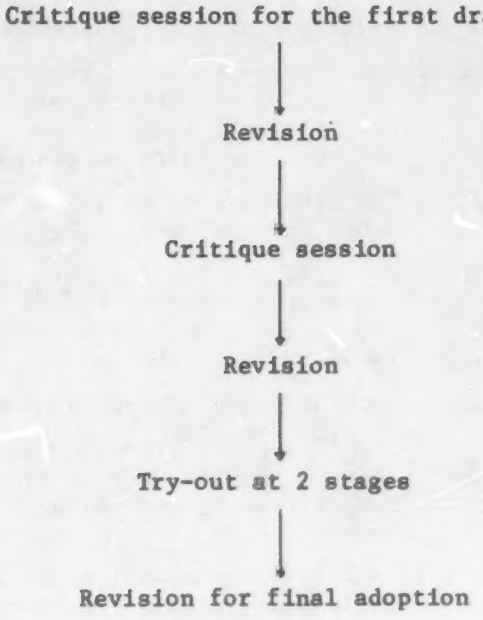
g) The revised copy is again presented to the Critique Committee for suggestions, if any, and for approval;

h) A try-out of the material on a small scale on 5 to 20 students first and then again in at least two classes in actual classroom situation is undertaken. Refinement is done based on the try-out results.

The above steps are put in a diagram as follows:

Read the programmed text on how to write the self-instructional materials, behavioural objectives and test items.

Each team writes behavioural objectives, test items and designs the approach for teachers to teach and for students to learn the assigned topic.



5. A research unit is needed to gather information on the needs of the target group, which shall be the bases for the preparation of the instructional materials.

6. Provision of locally prepared instruments for the evaluation of student achievement which are functional and practical.

Problems in implementation and solution

Problem 1 : Difficulty in keeping the motivation of the illiterate learners at high level in order to stimulate them to produce work of high quality.

Solution : Neighbourhood groups are formed. This has been found to be effective because neighbourliness is maintained.

Problem 2 : It is difficult to train teachers.

Solution : Tutors are trained in the local area by suitable officials. More manuals explaining the use of the Learning Packages are distributed.

Problem 3 : Selection of schools has to be planned.

Solution : Representative schools in the area to be covered by the Project have to be selected as experimental and control groups to find out the usefulness of the project.

Problem 4 : The preservation of learning materials and other records may pose management problems.

Solution : The teacher, besides being trained in these management aspects, has to be provided with enough containers (space, boxes) to keep them.

Problem 5 : Self-learning materials have to be re-used by other pupils.

Solution : This may be possible by allowing the students to record responses in separate answer sheets.

Problem 6 : Self-learning materials when used for individual learning may result in unhealthy competition and become inimical to the development of values of co-operation and mutual help.

Solution : Emphasis on peer-learning and group-learning activities may solve the problems.

Distance teaching techniques

In this section there are two modes of distance teaching techniques: 1) through radio, and 2) through self-learning materials.

1. Distance teaching techniques using the radio

Target group: 1. Trained teachers.

2. Untrained teachers.

Rationale

1. To provide teachers in remote areas an opportunity to upgrade their qualifications;
2. To maximize the use of resources other than the classroom for education and development;
3. To provide training for untrained teachers at minimum cost.

The use of distance study technique is based on the concept that education is not exclusively carried on in the classroom and need not be too expensive as to be far beyond the reach of the middle and low income groups. Likewise, it is guided by the viewpoint that educational institutions should maximize the utilization of their resources to hasten national development and that they should provide opportunities for higher education for the deprived regions in the country.

Inputs

The following inputs are needed:

1. Administration personnel: The distance teaching technique must be administered by the Dean of the Graduate School and/or a co-ordinator who supervises the operation of programme. Other personnel needed are lecturers, broadcast men, broadcast technicians, forum leaders, supervisors and clerical staff.

2. Facilities: A broadcasting network with broadcasting stations conveniently located is needed.

3. Instructional materials: The subjects offered on the air should be developed into suitable packages to be aired at regular weekly intervals. These should be varied forms such as straight lectures, dialogues, symposia and panel discussions so as to sustain the interests of the participants.

4. Forum discussions: Forum leaders for each centre should be recruited to conduct discussion meetings with the students on Saturdays or weekends. In these meetings the relevance and applicability of the radio broadcasts to their community problems and needs should be discussed.

5. Standards: To maintain standards in all centres, a common syllabus should be followed and mid-term and final examinations in all centres should be identical and administered simultaneously.

6. Evaluation: The performance of students should be evaluated based on the following criteria: 10 per cent for attendance in forums; 15 per cent for participation in forums; 20 per cent for term paper; 15 per cent for workbook; 20 per cent for mid-term examination and 20 per cent for final examination.

Problems in implementation and solutions

Problem 1 : Poor reception of broadcast due to poor weather conditions.

Solution : Re-broadcast of lectures missed by students.

Problem 2 : Difficulty of adjusting the schedule of broadcasts for the convenience of students.

Solution : A questionnaire study of the most convenient time of the participants. The results of the study should be used as the bases for the scheduling of radio broadcasts.

Problem 3 : Production of broadcasts that will sustain the interests of students.

Solution : Broadcasts should be presented in varied forms such as dialogues, symposia, panel discussions using actual graduate students

in the main campus. Experienced radio broadcasters should be employed rather than professors. The broadcasts should be properly scripted.

Problem 4 : Limited reading materials in the centres.

Solution : Packaged library materials should be sent on rotation to the centres. The forum leaders should send these packages at the end of every term and a new set of materials should be sent back to the centres for the new set of subjects that the participants need in the incoming terms.

Problem 5 : Limited financial resources.

Solution : Tap local aids to help finance the project as well as use again the prepared tapes and other materials developed over the years.

Problem 6 : Limited supply of radios.

Solution : The officials in the Department of Education and the government should evolve a scheme of supplying radios needed, considering the educational advantage of the device.

Problem 7 : Unsuitable broadcasts.

Solution : The training academies in co-operation with the classroom teachers should prepare the lessons. These lessons should first be tried out, after which revisions have to be done to produce more useful and interesting radio programmes.

2. Distance teaching using self-learning materials

Target group

1. Untrained teachers;
2. Trained teachers with incomplete academic preparation;
3. Trained teachers with complete academic preparation.

Rationale

This programme has the following objectives:

1. To facilitate training of all middle or low income teachers;
2. To reduce the cost of the training by using prepared materials for home study sent out through the post only once per semester and given directly to the participants when they come for orientation.

Input

Well-trained personnel who will implement the programme should include: a co-ordinator, instructional material developer, clerical staff, and registration and recruitment officers.

This technique calls for the preparation of self-learning materials as early as possible. This must be despatched through the post office to the different centres. In countries where the postal service is not regular, minimum use of the postal service should be made.

Problems in implementation and solutions

Problem 1 : Participants do not read the self-learning materials in their home.

Solution : a) An orientation meeting should be conducted on the use of these materials as well as on the benefits to be derived by the teacher participants as a form of motivation approach;

b) Materials should be designed in an interesting way so that the participants may be encouraged to read;

c) Diploma-holders in education should be appointed to help the trainees in their academic difficulties;

d) There should be mid-term visitation of the districts by officials of the centre where trainees should convene once a week to solve their problems;

e) Remuneration should be given to the consultant for his/her services to the trainees;

Problem 2 : Difficulty in keeping motivation of learners at high level.

Solution : This may be minimized by selecting leaders from the student groups who shall take charge of student conferences every weekend to discuss among themselves their common difficulties and help each other in the different aspects of their work. Student leadership is rotated among the participants.

Problem 3 : Irregular attendance of the participants.

Solution : The centre in charge should be strict to impose regular attendance. The importance of attendance in meetings should be emphasized.

Problem 4 : Varied qualifications and backgrounds of participants.

Solution : The centre in charge should hold staff meetings at least once a week to discuss the varied needs and problems faced by the trainees.

Problem 5 : Difficulty in understanding reading materials.

Solution : a) Self-learning materials should be made as simple as possible, so that they can be understood by the teacher-participants;

b) Trainers should explain the subject matter in simple language for the trainees to understand.

Problem 6 : The members of the co-ordinating team are not well-oriented with this programme.

Solution : There should be visitations to observe such programmes and short-term training courses on how to run the programmes more smoothly.

Problem 7 : Recruiting of new staff each year in the centre.

Solution : There should be a permanent staff in the central office to save the time for orientation of new staff members each year.

Problem 8 : Shortage of instructional aids and other necessary materials.

Solution : Produce sufficient materials for the participants using locally available resources as much as possible.

Problem 9 : Need for effective evaluation.

Solution : Feedback system should be designed to improve the programme.

Microteaching

I. Target group: Student teachers.

II. Rationale:

1. This technique links theory and practice since it requires the creation of relevant concrete teaching situations;
2. It assists novices to develop the range of teaching skills suited to the socio-cultural context which are needed for competent teaching;
3. It requires students to analyse their own performances and the performance of their peers in terms of identified teaching skills thus developing critical awareness.

III. Inputs

A. This technique can be used in the following modes:

1. With video-tape recorders;
2. With simple audio-tape recorders;
3. With no equipment.

1. With video-tape recorders

The advantage of having such sophisticated hardware is that students can watch themselves in action thus making their strengths and weaknesses more apparent to themselves.

Equipment needed:

i) An air-conditioned sound-proofed studio is necessary if equipment is to be kept in optimum condition;

ii) The studio should be able to accommodate upto 15 people comfortably. It should have a separate control room with TV monitors;

iii) In addition to the usual VTR hardware, there should preferably be at least one VTR camera with a zoom lens to focus on particular activities. The studio should be equipped with a minimum of two microphones, one for the 'teacher' and another on a boom for students;

iv) There should be an adequate supply of VTR tapes.

With such minimum equipment, it is possible to train upto 200 student-teachers in a semester of 18 weeks. Each group should consist of not more than 12 students; it is possible for three students to practice-teach in an hour so that four hours are needed for all in the group to participate in the programme. Each student should practice-teach at least six to eight times.

It should be borne in mind that equipment has a limited life-span and that maintenance costs increase as the equipment ages.

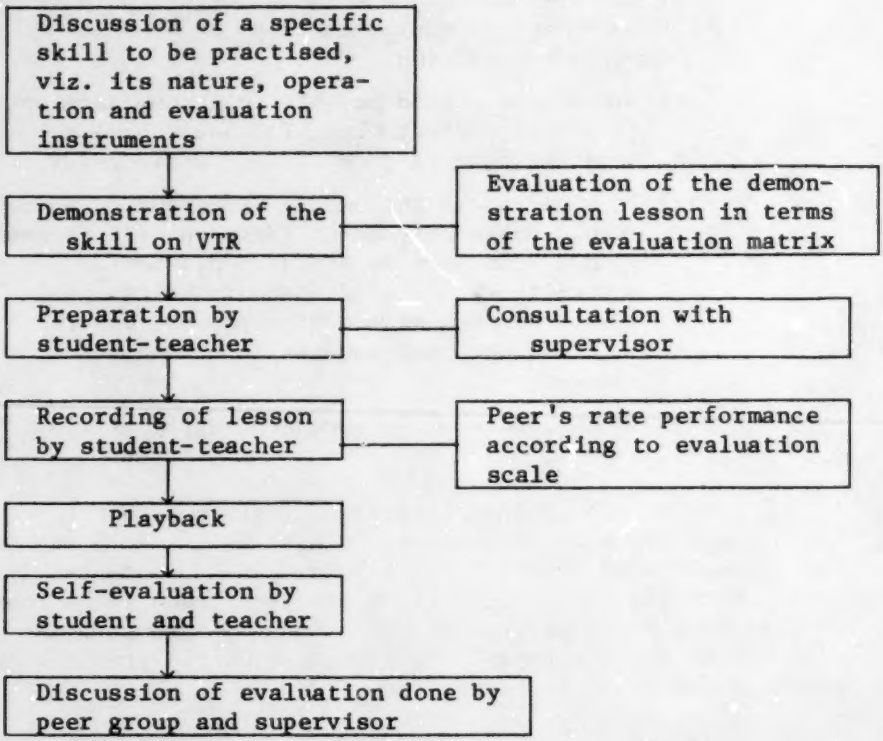
Studio crew required:

i) A staff member who will serve as programme co-ordinator;

ii) A technician preferably with some teaching experience or a staff member trained in educational technology;

iii) Two student assistants. Duties could be assigned according to a roster.

Procedure:


Discussion of a specific skill to be practised, viz. its nature, operation and evaluation instruments
Demonstration of the skill on VTR
Evaluation of the demonstration lesson in terms of the evaluation matrix
Preparation by student-teacher
Consultation with supervisor
Recording of lesson by student-teacher
Peer's rate performance according to evaluation scale
Playback
Self-evaluation by student and teacher
Discussion of evaluation done by peer group and supervisor

2. With simple audio-tape recorders

While students cannot watch themselves in action, it is possible to listen to themselves teaching. This also develops critical self-awareness. It has been pointed out that for the development of certain skills, the VTR is not necessary, e.g. the skill of questioning. Audio-tapes are more than adequate.

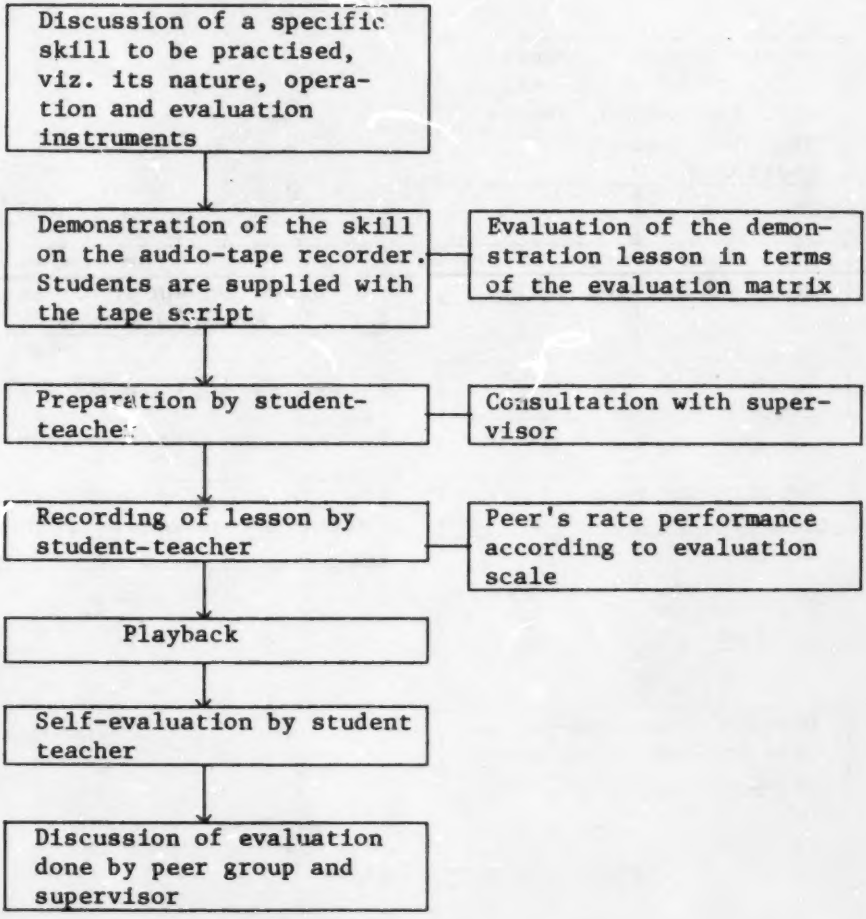
Equipment:

A good audio-tape recorder with sufficient fidelity for speech (40-9,000 hertz with low distortion) with a built-in electric condenser microphone. It should be serviced regularly to keep it in peak condition. Open-reel tape recorders usually have higher fidelity but are also bulkier and heavier. A good cassette tape recorder will

serve the purpose just as well.

There should be a ready supply of low-noise audio-tapes.

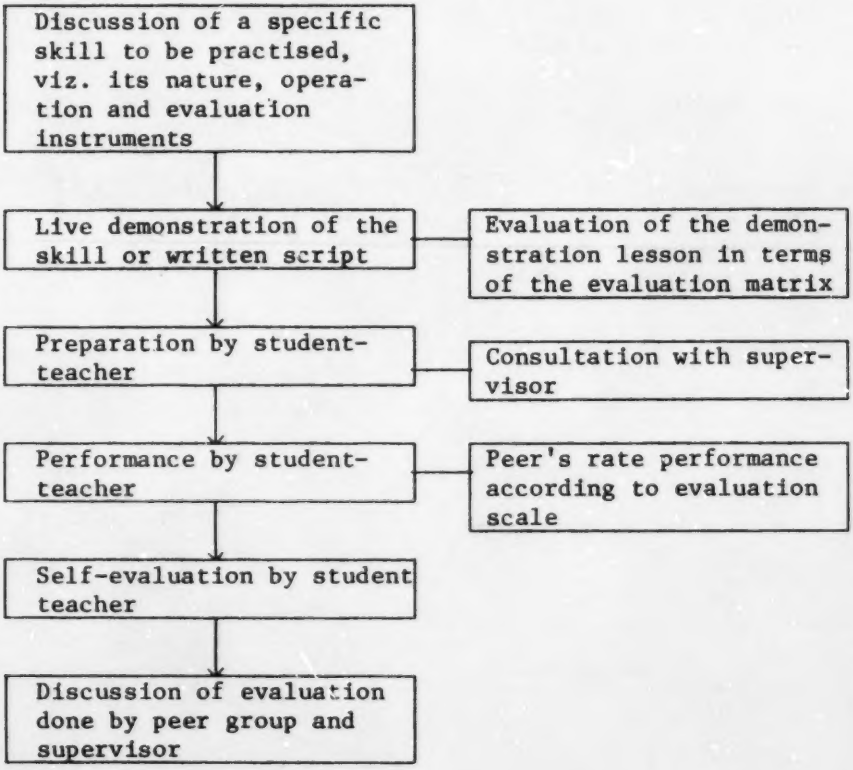
Procedure:


Discussion of a specific skill to be practised, viz. its nature, operation and evaluation instruments
Demonstration of the skill on the audio-tape recorder. Students are supplied with the tape script
Evaluation of the demonstration lesson in terms of the evaluation matrix
Preparation by student-teacher
Consultation with supervisor
Recording of lesson by student-teacher
Peer's rate performance according to evaluation scale
Playback
Self-evaluation by student teacher
Discussion of evaluation done by peer group and supervisor

3. With no equipment

While it is not possible for students to observe themselves in action, feedback can be obtained from their peers.

Procedure:


Discussion of a specific skill to be practised, viz. its nature, operation and evaluation instruments
Live demonstration of the skill or written script
Evaluation of the demonstration lesson in terms of the evaluation matrix
Preparation by student-teacher
Consultation with supervisor
Performance by student-teacher
Peer's rate performance according to evaluation scale
Self-evaluation by student teacher
Discussion of evaluation done by peer group and supervisor

B. Training of supervisors

It is essential to have a core group of lecturers who are well-informed and skilled in the use of this technique. This core group can conduct training courses for other staff members who are unfamiliar with the technique.

Training is best done in the form of practical workshops which require staff to practise the technique themselves.

A summary of a training programme for microteaching supervisors can be found in the country report presented by Thailand.

Some of the problems encountered in training staff to use this technique are:

i) Lecturers new to the technique have difficulty in identifying specific teaching skills;

ii) They experience difficulty in using the evaluation instruments;

iii) They have a tendency to impose their views on their students.

These are sometimes discouraging to students.

C. The choice of good teaching models

It is essential to identify good teaching models to exemplify desirable teaching behaviours. These can serve a two-fold purpose:

i) Students can emulate these models. Experience has shown, however, that they tend to follow these models slavishly. It may also be useful to show poor models that exemplify those characteristics that should be avoided;

ii) These models are useful in the process of identifying desirable teaching behaviours.

D. Drawing up the evaluation instrument

It is essential that the evaluation matrix be drawn up carefully, tried out and improved for each of the behaviours identified. It should be sufficiently specific so that students can use it without difficulty. Different groups of staff members could attempt to formulate the instrument, test it and modify it. The final model adopted could be either a meaningful synthesis of the best elements in each of the models or the best model devised.

E. Evaluation of the student effort and renewal of the programme

An evaluation of student endeavours should be undertaken regularly. The insights obtained can be used to improve the programme.

F. The various uses of microteaching

Microteaching can be used as:

i) A preparatory stage for teaching practice;

ii) An integral part of teaching practice;

iii) A supplementary or remedial programme for weak students;

iv) A resource for use by different subject departments;

v) An integrated practical pedagogic component of various teaching and education subjects;

vi) An optional course for student-teachers;

vii) An in-service course for improving teaching skills.

G. Outcomes

Microteaching has the following beneficial effects:

i) Students become more effective in various teaching skills;

ii) Experiences shared during the practice sessions help to foster initiative. It has been found that students become more willing to try out new techniques and approaches;

iii) It encourages the development of a problem-solving attitude in students;

iv) Students develop a positive attitude to teaching;

v) Supervisors learn a considerable amount from their involvement in the programme which also has a beneficial effect on their own teaching technique. It helps to develop insights into their own role.

Simulation teaching with/without the use of equipment

Target group: Trained teachers

The problems, modes and procedures are similar to those of microteaching. Teaching skills are not isolated

and practised in a discrete manner but are inter-related in the presentation of a complete lesson or portion of it.

An example of the rating instrument is shown in the country report by Singapore.

The use of VTR for presenting key lectures

Target group: Trained teachers

The built-in advantages of the VTR can be exploited by experienced staff in presenting concepts in an effective manner. Graphic materials as well as live situations can be shown and certain concepts can be dramatised so that students can learn from various experiences.

The key lecture can be followed up by workshops which have a task orientation.

An example of such an innovation is presented in the country report by Singapore.

Team teaching technique

Preamble:

Team teaching technique - using a procedure by an organization or team which pools its resources, interests and expertise in order to devise and implement an orientation programme or scheme of work considered suitable to the needs of a new group of personnel being trained and to the facilities available in that organization.

Target group.

Training of a set of teachers to perform in a different capacity or function: e.g. as curriculum officers or school administrators, etc.

Rationale:

i) To provide a basic understanding of the new role and function this target group will be expected to play. Thus the need for an exposure to the new tasks;

ii) To become a more effective officer in the new organization or role;

iii) The course proper to be completed in the shortest possible time, thus making use of maximum facilities in the most effective manner.

Inputs:

i) Organization:

a) A committee of planners to be appointed to carefully examine objectives, content, procedures, personnel needed to effectively run the course;

b) To bear in mind the needs of the organization for which the course is being organized. The choice of expertise to be utilized is of utmost importance;

c) To cater to the needs of the personnel being trained for their new role;

d) The provision of support staff and facilities to make the running of the course as smooth as possible - e.g. secretariat services, transport, printing, refreshments, other equipment etc.

ii) Methodology:

a) The timetabling of the course is vital to make it purposeful;

b) To introduce a variety of approaches to make the course interesting and meaningful. Some of the approaches may be classified as follows:

a. Introductory lecture on basic principles
b. Open forums and panel discussion
c. Case studies/problem-solving
d. Demonstrations
e. Simulated games
f. Role playing activities
g. Group dynamics
h. Viewing of films
i. Workshops and small group discussions
j. Visits
k. Data analysis
l. Basic reading packages, etc.

Problems

i) The heterogeneous nature of personnel involved may pose a problem. It may not only be an organizational but a personality kind of problem as well. This may be resolved in the grouping of the participants for workshops/ discussions;

ii) Theory and practice should go together in the planning of activities;

iii) Psychological reorientation to new tasks and roles could cause communication barriers. Expert handling of such problem areas may help to overcome and rechannel efforts to maximum outputs;

iv) In order to ensure that the programme drawn out is both meaningful and realistic, there may be a need to evaluate the course objectives, contents and outcomes so as to make changes, if necessary.

ANNEX I

AGENDA

1. Inaugural session.

2. Consideration of the agenda.

3. Exploration of problems and issues in the use of new educational techniques for preparing and upgrading teachers and other educational personnel.

4. Review and analysis of case studies on the subject.

5. Specification of the objectives and development of guidelines for the use of new educational techniques with reference to universalization of education.

6. Consideration and adoption of the report of the meeting and the draft guidelines.

ANNEX II

OFFICERS OF THE MEETING

Chairmen

Chairmanship was rotated among the following:

1. Mr. J.M.T. Rajan
2. Mrs. Paquita D. Gavino
3. Miss Nuanchan Potar
4. Mrs. Chew - Chua Lian Keow
5. Mrs. Phungchai Sindhvananda

Rapporteurs

Rapporteurship was rotated among the following:

1. Mr. Oliver Seet Beng Hean
2. Mr. K. Jegadeva
3. Mrs. Efigenia C. Occeña
4. Mr. J.M.T. Rajan
5. Mrs. Paquita D. Gavino

Members of the different groups:

1. Teaching approaches involving the use of self-instructional materials:

   Miss Nuanchan Potar

   Mr. Sawali Woyolukito

   Dr. Un Hyo Chang

   Mrs. Efigenia C. Occeña (Convener I)

   Mr. J.M.T. Rajan (Convener II)

2. Distance teaching techniques:

Dr. Sharifa Khatun

Mr. Chandra Raman Parajuli

Mr. Abdul Fatah

Mrs. Paquita D. Gavino (Convener I)

Mrs. Efigenia C. Occeña (Convener II)

3. Microteaching/CCTV:

Mrs. Phungchai Sindhvananda

Mr. Oliver Seet Beng Hean (Convener)

4. Team teaching:

Mrs. Chew - Chua Lian Keow

Mr. K. Jegadeva (Convener)

Editorial committee:

Mr. J.M.T. Rajan

Mr. K. Jegadeva

Mrs. Paquita D. Gavino

Mrs. Efigenia C. Occeña

Mr. Oliver Seet Beng Hean

Dr. H.K. Paik (ACEID)

Secretary:

Dr. H.K. Paik

ANNEY III

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1. Mr. Abdul Fatah
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Pakistan

8. Mr. Mohamad Rafiq Khan
   Divisional Inspector of Schools
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   (attended the meeting during the
   first week)

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ACEID

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Mr. N. Sagara
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Mr. R.P. Constandse
Associate Expert in Publications

ANNEX IV

LIST OF DOCUMENTS

Information Documents

ROEAO-78/APEID-SG. TT/INF.	-	General information

Working Documents

ROEAO-78/APEID-SG. TT/1	-	Annotated agenda
ROEAO-78/APEID-SG. TT/2	-	Provisional schedule of work
ROEAO-78/APEID-SG. TT/3	-	A project on ungraded school system, India by Mr. J.M.T. Rajan
ROEAO-78/APEID-SG. TT/3	-	Part-time and continuing education under non-formal education, India by Mr. J.M.T. Rajan
ROEAO-78/APEID-SG. TT/4	-	The programmed instruction packages "A", Indonesia, by Mr. Sawali Woyolukito
ROEAO-78/APEID-SG. TT/5	-	Multi-media package programme for teacher preparation for the elementary middle school development project, KEDI (Korea), by Dr. Un Hyo Chang
ROEAO-78/APEID-SG. TT/6	-	Team teaching technique in the training of curriculum officers for the Curriculum Development Centre, Malaysia, by Mr. K. Jegadeva

ROEAO-78/APEID-SG. TT/7	-	Distance teaching in-service programme for temporary untrained teachers during school terms, Malaysia, by Mr. K. Jegadeva
ROEAO-78/APEID-SG. TT/8	-	Teacher training through distance learning, Nepal by Mr. Chandra Raman Parajuli
ROEAO-78/APEID-SG. TT/9	-	Open programme, the University of Mindanao, Philippines by Mrs. Efigenia C. Occeña
ROEAO-78/APEID-SG. TT/10	-	The University on the air, Philippines by Mrs. Paguita D. Gavino
ROEAO-78/APEID-SG. TT/11	-	Two instances of the use of CCTV to upgrade competence in classroom evaluation and teaching, Singapore by Mr. Oliver Seet Beng Hean
ROEAO-78/APEID-SG. TT/12	-	Project RIT, Thailand, by Miss Nuanchan Potar
ROEAO-78/APEID-SG. TT/13	-	Microteaching approach in the programme of teacher preparation at Pranakorn Teachers College, by Mrs. Phungchai Sindhvananda

ANNEX V

ELEMENTS OF NEW PLANS

Elements for plans on the project of distance teaching using radio for Bangladesh and Nepal are included for their implementation in their respective countries.

Proposed elements for a plan on distance teaching using radio for Bangladesh*

Background

In universalization of primary education as well as qualitative improvement of education at this level, teachers play a great role. But when the position of primary teachers in the schools of Bangladesh is taken into account as regards their training a considerable number of them (45 per cent of the total number of teachers) are untrained. Poor quality of instruction in the classroom is widely prevalent. The First Five-Year Plan of Bangladesh includes a proposal to improve the quality of teachers at this level through the media of radio and television without disturbing the normal functioning of the school as well as without involving extra cost.

The experiences of some Asian countries regarding use of distance teaching technique such as radio for teacher training provides ample example for feasibility of adopting the same technique for training the large number of untrained teachers as well as for improvement of quality of instruction at the primary level. The success of Indian experience of training primary school teachers through a

* Drafted by Dr. Sharifa Khatun (Bangladesh), with the help of Mrs. Chew - Chua Lian Keow (Singapore) and Mrs. Paquita D. Gavino (Philippines)

multi-media package through TV and radio provides a guide-line for adopting a similar technique for training the untrained primary school teachers. However at this stage of the development of Bangladesh, provision of TV sets to rural primary teachers is not possible. From the point of view of economy and the availability of human and material resources it would be rather feasible to use only the radio for training teachers of primary schools in Bangladesh.

Target group

Untrained teachers of primary schools.

Rationale

The rationale for adopting the new project of teacher training are:

i) The existing untrained teachers are not eligible for enrolment in the primary teachers training institutes;

ii) The quality of instruction in the classroom is to be improved to reduce wastage and stagnation;

iii) Training is arranged in a way that teacher trainees are not withdrawn from their teaching work in the schools;

iv) A large number of untrained teachers have to be trained as rapidly as possible, and at minimum cost.

Design and development of the project

1. Structure and duration

The training will be given in two phases for a period of one year: (i) initially, on campus and (ii) later on, through radio, and one-month intensive courses.

The existing curricula of primary training institutes is designed to provide participants with training, using two different types of media.

The whole course covering on-campus programme and teaching through radio is designed for one year similar

to the regular pattern of primary teacher training programme. On-campus courses are taught in one term; radio courses in two terms; and finally intensive courses for one-month.

A. On-campus programme

The on-campus programme covers two elements: 1) teaching of pedagogical subjects; 2) intensive review of training after the radio lessons are given and followed by examination at the end of the project.

Content of on-campus programme

The on-campus courses involve two phases: the first covers pedagogical courses such as principles of education, educational psychology, method of teaching, orientation to student teaching and actual practice-teaching supervised by teacher monitors. These courses are of practical nature since they are oriented to real classroom situations.

The second phase covers:

i) an intensive on-campus review of courses monitored through radio during the last two terms;

ii) clarification of problems and issues through discussions;

iii) administration of the final examination to the participants.

B. Radio programme

Topics not covered in the On-Campus Courses are monitored through radio. The following curricular materials would be prepared for the purpose:

a) Thirty radio lessons for each of the school subjects; each of 20/22 minutes' duration would be developed.

b) Teachers' Manual containing syllabus of each subject, the text and lesson, guide for teachers' activities and assignments and use of instructional materials would be prepared for each subject.

c) Another additional 20-minute discussion would be carried on to sustain the motivation of the participants.

d) Distribute handbooks which contain the following:

i) introduction to radio programme and the role of teacher monitors;

ii) role of the participants;

iii) use of radio and cassettes;

iv) guide to each lesson; and

v) feedback and evaluation.

Personnel

A team consisting of the resource personnel, curriculum specialist, radio producer, teacher monitor and other technical crew would be entrusted with the work of designing the curriculum for the on-campus and radio programmes.

Selection of places

1. On-campus courses would be offered in selected primary training institutes and also in the academy for fundamental education during vacation periods.
2. Existing facilities of Radio Bangladesh would be used for teacher training through radio monitored during working days.

Implementation of the project

Implementation of the project would be undertaken in three phases: development, pilot testing, and full operation.

1. In the development stage, the new curricula, syllabi texts, teachers' manual and handbook would be prepared. The prepared materials shall be pre-tested on a selected group of participants and revised in the light of the findings.

2. In the experimental stage the new programme shall be taught to a selected group. After the evaluation of the experimental programme necessary modifications will be made and the whole programme shall be ready for full operation.

Basic requirements for operation of the project:

1. Selection of sites for on-campus training;
2. Entering into contract with radio authority for broadcast purposes;
3. Selection of participants;
4. Fixing time of broadcast according to the convenience of the participants;
5. Provision for availability of radio sets, cassettes and batteries in the reception centres;
6. Selection of teacher monitors;
7. Training of personnel for planning, production and evaluation of the programme;
8. Orientation of head teacher of primary schools, instructors and superintendents of the primary training institutes;
9. Orientation of the participants.

Operation at the participant level

1. At the receiving centre, 2/3 of primary school teachers shall be selected as participants and a radio set shall be provided.
2. The head teacher shall supervise the activities in the centre.
3. After each broadcast lesson the participants shall discuss the lesson among themselves.
4. They may also attend contact sessions arranged for them in the Primary Teacher Training Institute (PTI) where they may get immediate feedback.
5. The head teacher shall evaluate performance in practice-teaching of each participant.

Personnel needed for the whole programme

1. Chief of the project for co-ordinating the programme.
2. Subject specialist for preparing different courses.
3. Curriculum specialist for reorganizing the content.
4. Personnel for preparing the text, teachers' manual, monitor's guide, references and reading materials.
5. Teacher monitors for teaching through radio.
6. Research expert for evaluation of the programme.
7. Administrative and management personnel for the operation of the programme.
8. Technical assistants.

Provision for the initial training courses

The Institute of Education and Research may arrange for the training of the following personnel needed:

1. Resource personnel
2. Curriculum and subject specialists
3. Teacher monitors
4. Programme producer
5. Head teachers, instructors and superintendents.

Inter-departmental co-operation

The project would involve co-operation of more than one ministry. The approval of the Finance Ministry for funding the Ministry of Education is needed to operate the whole programme, and the Ministry of Information and Broadcast has to provide radio facilities for operating the project.

Anticipated problems and suggested strategies

Problems	
1. Not getting immediate feedback from the participants	Strategy: Arrange for contact lessons at the nearest primary training institutes. Process: (a) The project co-ordinator contacts the nearest P.T.I. for arrangement of necessary accommodation. Instructors of the institute lead the discussion; (b) In areas where there is no P.T.I. available feedback through the post may be arranged.
2. Meeting difficulties faced	Strategy: The participant writes to the teacher monitor for clarification. Process: (a) Problems of students received by monitors may be clarified through the radio; (b) The day and time for problem-solving sessions is set aside.
3. Making radio sets, batteries available to the entire target group	Strategy: Supply radio and batteries at cheaper rate to the schools where several participants meet. Process: The Ministry of Education should make arrangement to supply radio sets at discount rates.
4. Reluctance of the head teachers to supervise the participants	Strategy: Give additional allowance to head teachers. Process: Ministry of Education should include this additional expenditure in the budget.

Problems	
5. To avoid monotony of radio lessons	Strategy: Use different techniques such as discussion, dialogue, role playing, symposia, and panel discussion in presenting radio broadcasts. Process: Advanced and detailed planning in using the above techniques is essential.
6. Weather interference	Strategy: Make arrangement for rebroadcast lessons missed due to interference in transmission. Process: (a) Participant shall be informed of the schedule of rebroadcast beforehand through radio; (b) Co-operation between the broadcasting station and the teacher monitor for the rebroadcast is needed.

Proposed elements for a plan on distance teaching using radio for Nepal*

Background

Despite the efforts and developments of three decades, universalization of education in Nepal has not yet been fully realized due to lack of trained teachers.

Aware of this situation, the Institute of Education, Dean's Office, launched an innovative programme called 'Teacher Training Through Distance Teaching' in the beginning of 1977, using self-learning instructional materials as the technique in training primary school teachers.

This programme has not produced teachers as fast as needed. To supplement the first programme, teacher training through radio will be explored. This programme will involve the broadcast of lessons to teachers in the remote areas of the country.

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* A draft prepared by Mrs. E.C. Occeña (Philippines), Mr. C.R. Parajuli (Nepal) and Mrs. P.D. Gavino (Philippines)

Target group

This new programme will be directed to the untrained teachers in service.

General objectives

To train untrained teachers within a short span of time and thereby accelerate universalization of primary education.

Specific objectives

1. To improve the quality of teaching in general;
2. To provide in particular, more opportunities to those in the remote and rural districts of the country in order to upgrade their qualifications and to make them better teachers;
3. To help the trainees who face difficulties in understanding any matter covered in self-learning materials;
4. To take advantage of several media and resources in an integrated manner in promoting teacher training and upgrading;
5. To train teachers at the minimum cost and maximum speed.

Economic incentives

1. Teachers receive training while they are still carrying on their teaching work, thus saving cost of appointing substitutes;
2. The need for more teacher training institutes is met without investment in building equipment and other resources needed for such institutions;
3. Teachers do not face the problem of leaving their families while they receive training, which would be the case if they are to enrol in regular programmes;
4. Teachers will have the economic incentive to complete the training, as they would, thereby qualify for higher pay scales.

Inputs of the programme

The following will be the inputs of the programme:

1. Personnel:

   i) Radio programme director whose duties will be to co-ordinate and supervise the programme;

   ii) Qualified instructors who have special training in writing lessons for broadcast. They will develop teaching materials;

   iii) Trained broadcast announcers who will voice the lessons.

   iv) Broadcast technicians who will tape-record lessons for broadcast;

   v) Tape librarian who will keep and record all taped lessons;

   vi) Supervisors for monitoring the broadcast;

   vii) Evaluation and research staff.

2. Engineering work (to house the project):

   i) Building with air conditioner and sound-proof studio;

   ii) Transmitting equipments with sufficient power.

3. Material resources:

   i) Receiving sets;

   ii) Dry cells or solar energy provision;

   iii) Tape recorders and tapes;

   iv) Storage furniture;

   v) Learning or instructional materials.

4. Financial allocations to meet the cost of the programme.

Operation procedures

Registration of students:

1. A team from the central office in Kathmandu will go to the districts to administer qualifying test to teacher applicants;
2. Those who pass the test will be enrolled in the programme and will be required to attend the orientation meeting. During this meeting, the enrollees will get instruction on how to listen to the broadcast lessons, how to use the instructional materials and other information about the programme. They will receive a complete set of learning materials for each subject together with broadcast schedules, examination schedules and others.

Preparation of instructional materials:

The curriculum in this programme will be the same as in the regular programme. All the teachers recruited will prepare 40 lessons for each subject following the official format.

1. Pre-test:

(This pre-test will be a short objective test to assess previous knowledge of the trainees. The trainees will check their own test on the basis of the accompanying key for correction).

2. Lesson objectives:

(This will state what the trainees will be expected to learn in the lesson).

3. Overview of the lesson:

(This will highlight the important parts of the lesson.)

4. Lesson presentation:

(This is a complete discussion of the entire lesson.)

5. Post-test:

(This will assess what the trainees have learnt).

If the student does not answer correctly all the test items, he should read the lesson again in order to be able to answer correctly all the questions.

6. Practical exercises:

(These will relate the theories learnt in the lesson to practical aspects in the school).

Broadcasting the lessons

1. Each lesson will be recorded on tape, with time limit of 30 minutes;
2. The taped lessons properly labelled will be stored and classified;
3. Two lessons per week per subject will be aired on definite schedule. For example, Broadcast Schedule (Week 1):

	S	M	T	W	Th	F
4:4.30	S1L1	S1L2	S2L1	S2L2	S3L1	S3L2
4:40-5:10	S4L1	S4L2	S5L1	S5L2	S6L1	S6L2

* S = Subject S1L1 = Subject 1, Lesson 1

L = Lesson

4. Teachers in the same school meet after listening to the lessons to have discussions to clear the confusions found in broadcasts.

Evaluation of student achievements

1. After six weeks, the trainees will go to the Centre to take the mid-term internal assessment;
2. After 12 weeks, they will go to the Centre for the intensive practicum under the supervision of the trainor;

3. During the intensive practicum, they will undergo two internal assessments in each subject;

4. Final examinations will be given to those who passed the three internal assessments. Successful participants will be awarded certificates and mark sheets.

Anticipated problems and possible solutions

1. Co-ordination within and between concerned ministries should be done to assure the policy makers, programme planners, technicians, field staff and evaluators that they do not work at cross-purposes;

2. Nepal's national radio service has no time to share for educational broadcasting. Besides this, its transmitting station is not so powerful to reach each and every corner of the remote districts. So provision should be made to establish powerful transmitting station to cross the high mountains and reach all parts of the country for educational broadcast, or establish small kilowatt stations as needed and relay the programme in medium wave frequency;

3. It is foreseen that rural and remote areas of Nepal lack basic materials. So provision should be made to provide dry cell batteries for the transistors at a nominal cost, or transistors operating with solar energy should be supplied to the schools.

4. Time for broadcasting should be well arranged in such a way that the teachers would get a chance to listen to the programme. For this, a survey should be done to find out better results;

5. Conscious efforts should be made to motivate the trainees and convince them that they would be upgraded and benefitted with it;

6. Effective utilization of educational technology depends upon teacher preparedness. The teachers concerned should be trained first and the administrators should be exposed to media advantages and limitations;

7. Regular feedback and evaluation should be done regularly to assess the effectiveness of the project;

8. Maintenance unit should be established in the centre for the repair and maintenance of the transmitting station and receiver sets. This team should go once a month to the districts for repair and maintenance.

PUBLICATIONS RELATED TO TEACHER EDUCATION

Available from Unesco, Bangkok

1. *Teacher education and curriculum for development, 1975*
2. *Alternative structures and methods in teacher education, 1975*
3. *Continuing education for teacher educators - advanced-level workshops, 1976*
4. *Preparing teachers for education in rural development - a handbook, 1977*
5. *Exploring new directions in teacher education, (Teacher Education 1) 1976*
6. *Exploring new directions in teacher education: re-orienting teacher education for rural development, (Teacher Education 2) 1977*
7. *In-service training of teachers in Sri Lanka; Paris, Unesco, 1976*
8. *Continuing education for teacher educators: handbook of suggestions for organizing advanced-level workshop, 1978*
9. *Continuing education for teacher educators - advanced-level workshops: report of a regional workshop, 1978*
10. *Developing instructional modules for teacher education - a handbook, 1978*
11. *Developing instructional modules for teacher education - selected exemplar modules, 1978*